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DEBENEDICTIS, PAUL

- 1 - Galápagos Islands
January 10 - March 23, 1964
Catalogue Nos. 280-392
Journal
Species Accounts
Birds

- 2 - Miscellaneous: California and foreign
April 26 - October 6, 1964
Catalogue Nos. 393-433.
Journal

DE BENEDICTIS, PAUL

Galápagos Islands

January 10 - March 23, 1964

Catalogue Nos. 280 - 392

Journal

Species Accounts

Birds

Catalogue

Catalog

1 mi. N Academy Bay, 100[±] ft., Santa Cruz Is., Galapagos

23 Jan, 1964

280. ^{imm.} ♂ Coccyzus (juv.) 28.2 gm. no fat {testis lf. 2 mm. ff. 3 mm.}

Santa Cruz Is., Galapagos. (collected by a native)

21 Jan, 1964 (died of starvation)

281 ♂ Laterallus spilonotus 26.2 gm. no fat {testis lf. 6x3 mm. rt. 5x3 mm.}

Punta Espinosa, Fernandina Is., Galapagos

30

Jan, 1964

(collected by Alden H. Miller)

+ Pt. SKEL

282

♂ (testes R 19x6 mm. L 28x7 mm.; epid. +)

Orizomys

271-123-34-22^N 104 g.

+ Pt. SKEL

283

♀ (no emb)

"

251-116-31-20^N 72 g.

+ COMP. SKEL

284

♀ (no emb)

"

243-109-33½-21^N 70 g.

31 Jan. 1964

(do.)

285

♀ Oceantia gracilis

17.6 gm. mod fat. ovary 5x3 mm; largest fol. 2 mm.

286

♂ Tropidurus

(total) (S.V.L.)
26.3 — 104 mm

(photographed)

alcoholic

287

? ♂ Orizomys

100-40-18-8½^N 10.1 gm.

1 Feb.

alcoholic

288

sex?

Orizomys

102-40½-17-8^N 9.5 gm.

collected Alden H. Miller. (#289-290)
mod. fat

289

♀ Puffinus Lherminieri

172 g. (ovary 8 mm, largest ova 2 mm.)

290

♂ Larus atricillus

285 gm. mod. fat. testis 4 mm.

2 Feb

291

♂ (ad sk.) Nesomimus parvulus

37.6 gm. no fat. testis 34½ mm

alcoholic
292

sex? Nesomimus parvulus

42 gm

Catalog

Punta Espinosa, Fernandina Island, Galapagos.

3 Feb, 1964

293 Dromicus occidentalis

(total) (S.V. length)
411-309 mm.

294 ♂(ad.sk.) Dendroica petechia

12.4 gm. no molt. no fat. testis R 7x5 mm.
L 8x7 mm.

295 ♂(ad.sk.) Geospiza

13.3 gm. no fat (testis R 3x1 1/2 mm.
L 4x1 1/2 mm.)

296 ♀(ad.sk.) "

11.6 gm. little fat (ovary 4 mm; ova largest
2 1/2 x 1 1/2 mm.)

297 ♂(ad.sk.) "

13.0 gm. little fat (testis R 2 1/2 x 1 1/2 mm.
L 3x2 mm.)

298 ♂(ad.sk.) Nesomimus parvulus

97.7 gm. little fat (testis R 8x4 mm.
L 9x6 mm.)

29 Jan, 1964

(collected by Ross Kriester)

299 Dromicus occidentalis

679-521 mm. 26 gm.

West side Copa Hill, 570 m., Santa Cruz Is., Galapagos

Feb 5, 1964 (picked up by Robert H. Pyle)

300. Pterodroma phaeopygia

Academy Bay, Santa Cruz Is., Galapagos.

Feb. 6, 1964

301. ♀(ad.sk.) Geospiza fortis 28.8 gm.; mod. fat; brood patch (largest ova. 2 mm.)

302 ♂(ad.sk.) Geospiza magnirostris 29.3 gm.; little fat (testis R 7x7 mm.
L 8x6 mm.)



303. ♂(imm.sk.) Platyspiza evassirostris 31.5 gm.; little fat; (testis R 8x6 mm.
L 8x6 mm.)

304/ ♀(ad.sk.) Nesomimus parvulus 41.9 gm.; little fat (largest ova 2 1/2 mm.)

Feb 7, 1964



305 ♂(imm.sk.) Camarhynchus parvulus 13.4 gm. little fat (testis R 5x4 mm.
L 6x4 mm.)

Tortuga Bay, Santa Cruz Island, Galapagos.

Feb 8, 1964

306 ♂ Sterna

125 gm. no fat (testis 2 mm.)

P. De Benedictis
1964

Catalog

Academy Bay, Santa Cruz Island, Galapagos.

Feb. 8, 1964



307 ♀ (imm. sk.) Geospiza scandens

21.5 gm. little fat. (one follicle largest ova. 1 mm.)

308 ♂ (ad. sk.) " "

21.9 gm. little fat (testis R 6x4 mm. L 7x5 mm.)



309 ♂ (imm. sk.) " "

20.5 gm. little fat (testis R 6x4 mm. L 7x5 mm.)



310 ♂ (imm. sk.) Geospiza fuliginosa

14.9 gm. little fat (testis R 5x4 mm. L 6x5 mm.)

Punta Suarez, Isla Española, Galapagos.

Feb. 12, 1964

skull only

311

sex? Diomedea irrorata (pick up)

skel. only.

312

sex? Neopelea galapagoensis (pick up)

313

Dromicus hoodensis 678-482 mm.

Feb. 13, 1964



314 ♂ (ad. sk.) Geospiza fuliginosa

14.1 gm. no fat (testis R 4x4 mm. L 5x4 mm.)

315 ♀ (imm. sk.) Geospiza conirostris

25.0 gm. little fat (largest ova 1 mm. 2 ova rt. side)

316 ♀ (ad. sk.) " "

24.8 gm. little fat (largest ova 1 mm.)

317 ♀ (ad. sk.) " "

26.4 gm. mod. fat (largest ova 2 mm.)

318 ♂ (ad. sk.) " "

28.2 gm. little fat (testis R 7x6 mm. L 7x6 mm.)

Feb. 14, 1964

319 ♂ Creagrus furcatus

116.5 oz. little fat (testis 4 mm.)

320 ♂ (ad. sk.) Nesomimus macdonaldi

71.1 gm. little fat (testis R 11x7 mm. L 12x7 mm.)

321 ♀ (ad. sk.) " "

55.2 gm. little fat (largest ova 3 mm.)

322 ♀ (ad. sk.) Cuthidea olivacea

9.0 gm. no fat (largest ova. 1 mm.)

323 ♂ (ad. sk.) " "

8.8 gm. no fat (testis R 4x4 mm. L 4x4 mm.)

324 ♂ (ad. sk.) " "

8.4 gm. no fat (testis R 4x3 mm. L 5x4 mm.)

325 ♂ (ad. sk.) Geospiza fuliginosa

13.5 gm. no fat (testis R 3x3 mm. L 3x3 mm.)

326 Dromicus hoodensis

642-464

skull only

327

Diomedea irrorata

pickup (collected by Carl Koford)

P. De Benedictis
1964

Catalog

Punta Cevallos, Isla Espanola, Galapagos

Feb 15, 1964

- 328 ♂(ad.sk.) Geospiza conirostris 26.7 gm. fat? (sex by plumage)
329 ♂(ad.sk.) Nesomimus macdonaldi 75.5 gm. mod. fat. (testis ^{R 20x7 mm.} L 12x7 mm.)
330 ♂(ad.sk.) " " 68.0 gm. little fat (testis ^{R 9x7 mm.} L 11x7 mm.)
331 sex? Phaethon aethereus pickup (collected by Carl Koford)

Isla Gardner (near Hood), Galapagos

Feb. 15, 1964

- 332 ♀(ad.sk.) Geospiza conirostris 29.1 gm. heavy fat (largest testis ^{R 10x7 mm.} L 7x4 mm.)
333 ♂(ad.sk.) Nesomimus macdonaldi 63.1 gm. ^{little} no fat (testis ^{R 10x6 mm.} L 9x7 mm.)

Punta Suarez Isla Espanola, Galapagos

Feb 17, 1964

- 334 ♂(ad.sk.) Myiarchus magnirostris 15.1 gm. no fat (testis 11x6 mm.)

2 1/2 m. NW Punta Cevallos, Isla Espanola Galapagos

Feb 17, 1964

- 335 Dromicus hoodensis 698-522 100 ft. elev
336 " " 714-538 200 ft. elev
337 " " 727-520 250 ft. elev.

3 mi. E Punta Suarez, Isla Espanola, Galapagos

Feb. 17, 1964

- 338 Dromicus hoodensis 773-558 300 ft. elev.

Catalog

Punta Suarez, Isla Española, Galapagos

Feb. 19, 1964

skel. only
339

sex? Diomedea irrorata (pickup) adult pl.

340 ♀ Nesopelia galapagoensis 81.0 gm. no fat (largest ova 2 mm.)

341 ♀ " " 68.5 gm. little fat (largest ova 1 1/2 mm.)

342 ♂ Sula dactylatra 316.14 oz. no fat (testis 21 x 7 mm.)
(testis 21 x 6 mm.)

SE corner of Isla Santa Fe, 300 ± ft., Galapagos

Feb 20, 1964

343 ♂ (ad. sk.) Geospiza fuliginosa 15.0 gm. little fat. (testis R 7 x 4 mm.)
L 7 x 4 mm.)

344 ♂ (imm. sk.) " " 13.0 gm. no fat (testis R 5 1/2 x 3 mm.)
L 5 x 3 1/2 mm.)

345 ♀ Nesopelia galapagoensis 58.0 gm. no fat (largest ova 1 mm.)

346 ♂ (ad. sk.) Nesomimus parvulus 46.1 gm. no fat (testis R 13 x 7 mm.)
L 11 x 6 mm.)

347 ♂ (ad. sk.) " " 43.8 gm. little fat (testis R 10 x 5 mm.)
L 11 x 6 mm.)

Academy Bay, Isla Santa Cruz, Galapagos

Feb. 13, 1964 (collected by S. Devine)

alcoholic
348

hasiurus

El Chato, 225 ± m.,

Feb 20, 1964

Isla Santa Cruz, Galapagos

(Sigurd Horneman, collector)

349 ♀ Neocrex erythrops

no wt. no fat. (largest ova 1 1/2 mm.)

350 ♀ Gallinula chloropus

no wt no fat (largest ova 9 mm.)

- 2½ mi. ENE Wreck Bay, 600±ft., Isla San Cristobal, Galapagos
Feb 23, 1964

- 2 mi. ENE Wreck Bay, 700[±] ft, Isla San Cristobal,
Galapagos Feb 23, 1964

- 

- 

- ## Skeleton

- Eaten by Dave Balfore's cat

skeleton

- Eaten by Dave Balfour's cat

359 ♂ (ad. sk.) Nesomimus melanotis 49.4 gm. little fat (testis 10×5 mm, ovary 11×8 mm)

- 360 ♀ (ad. sk.) " " 52.4 gm. " " (largest ova 4 mm)

- skeleton

- 361 ♂ (ad. sk.) " " 46 gm. little fat (testis 6 mm.)

P. DeBenedictis
1964

Catalog

Purchased in Guayaquil, Ecuador. no exact loca lit,
died March 6, 1964

skeleton

362. ♂ hummingbird. no wt. starved, no fat. testis 33mm.

363 Playas, Guayas Prov., Ecuador-
Anceira March 3, 1964

2 mi. --- Playas, Guayas Prov., Ecuador-
MARCH 3, 1964

364 ♂ (ad. sk) black + red? cotinga no wt. little fat (testis 4mm.)

Guayaquil, Guayas Prov., Ecuador-
March 4, 1964

365 ♂ small parrot

29.1 gm. little fat (testis R 31 x 2 1/2 mm, L 6 x 3 mm)

366 ♂ (ad. sk) Sporophila

8.3 gm. little fat (testis R 24 x 6 mm, L 5 x 4 mm)

367 ♂ (ad. sk.) "

8.6 gm. " " (testis R 27 x 5 mm, L 7 x 5 mm)

368 ♂ (ad. sk.) grassquit

9.4 gm. " " (testis R 60 x 4 mm, L 6 x 4 mm)

369 ♂ (ad. sk.) "

8.7 gm. " (testis R 44 x 3 mm, L 6 x 4 mm)

Cochaucay, 80 km from Guayaquil on Road to Quito, Ecuador

March 4, 1964 (purchased from Ecuadorians)

370 ♂ (ad. sk) Geothlypis

14.3 gm. little fat (testis R 48 x 4 mm, L 6 x 3 mm)

(skinned March 12, 1964)



P. DeBenedictis
1964

Calatay

Chatham Bay, Cocos Island, Costa Rica

March 8, 1964

- 371 ♂ (imm. sk.) Pinaroloxia inornata 14.1 gm. mod. fat (testis 2 1/2 mm)
372 ♀ (imm. sk.) " " 13.0 gm. mod. fat. (largest ova 1/2 mm)
373 ♂ (imm. sk.) " " 12.0 gm. mod. fat (testis 1 mm.)
374 ♀ (imm. sk.) " " 14.4 gm. heavy fat (largest ova 1/4 mm)
375 ♂ (imm. sk.) " " 13.1 gm. mod. fat (testis 2 mm)
376 ♂ (ad. sk.) Dendroica petechia 12.8 gm. little fat (testis R 8x6 mm, L 8x6 mm)
377 ♀ (ad. sh.) " " 11.1 gm. little fat (largest ova 1 mm)
378 ♂ Gygis alba no wt little fat (testis R 5x3, L 7x5)

March 9, 1964

- 379 ♂ (imm. sk.) Nesotichus 12.0 gm. mod. fat. (testis R 4x2 mm, L 4x2 mm)
380 ♂ (imm. sk.) Pinaroloxia inornata 12.9 gm. mod. fat (testis R 5x4 mm, L 6x5 mm)
381 ♂ (ad. sk.) " " 13.9 gm. mod. fat (testis R 1/2 x 1 1/2 mm, L 5x4 mm)
382 ♀ (? ad. sh.) " " 12.2 gm. mod. fat / largest ova 1 mm
383 ♀ (? ad. sk.) " " 12.4 gm. " " (largest ova 1/2 mm)
384 ♂ (imm. sk.) " " 13.4 gm. mod. fat. (testis R 3x2 mm, L 4x2 mm)
385 ♂ (imm. sk.) " " 13.8 gm. mod. fat (testis R 8x5 mm, L 9x6 mm)
do. 386 ♀ (imm. sh.) " " 13.6 gm. mod. fat (largest ova 1 mm)
do. 387 ♀ (imm. sk.) " " 13.8 gm. mod. fat. (" " 1/2 mm)
388 ♂ (ad. sk.) " " 12.4 gm. mod. fat (testis R 7x8 mm, L 8x6 mm)
389 ♀ (imm. sk.) " " 12.4 gm. heavy fat (largest ova 1/4 mm)
390 ♂ (imm. sk.) " " 12.6 gm. mod. fat (testis 1 mm)
391 ♂ (? ad. sk.) " " 15.2 gm. mod. fat (testis R 5x4 1/2 mm, L 7x5 mm)
392 ♂ (sex by plumage) " " 13.4 gm.

NOTE

#371-378 skinned March 14; #379-383 + 388-389 skinned

March 15; #384-387, 390-392 prepared March 16

Journal

P. DeBenedictis
1964

TABLE 1 POSITION,
WATER TEMP., WIND.
on board "Golden Bear" to
the Galapagos.

DATE	TIME	LAT	LONG	COURSE	H ₂ O temp.	DIR. Knots WIND
Jan 10	2000 ^{PT}	36°29'N	122°09'W	—	—	—
11	0800	33°38'	120°55'	157.5°	—	—
	1200	33°12'	120°30'	"	—	—
	1600	32°24'	120°00'	—	15°C	06 " "
	2000	31°35'	119°32'	153	—	—
12	0800	28°58'	115.13	V	—	—
	1000	28.° ^{36'} 25'	117.° ^{48'} 25'	—	17.6°C	02 13
	1200	28°20.5'	117°25.5'	V	—	—
	1600	27°42'	116°42'	—	17.6°C	05 16
	2000	27°05'	116°05'	135°	—	—
13	0800	25°01'	113°51.5'	136°	—	—
	1000	24°36'	113°30'	—	20.8°C	02 14
	1200	24°19'	113°07.0'	132°	—	—
	1700 MST	23°36'	112°24'	—	22.3°C	00 00
	2000	23°07'	111°49'	135.5°	—	—
14	0800	21°02.5'	109°33.5'	134.4°	—	—
	1000	20°30'	109°06'	—	23.7°C	04 12
	1200	20°20.5'	108°57.0'	135.9°	—	—
	1700	19°30'	108°06'	—	25.8	04. 19
	2000	18°55'DR	107°34.5'DR	137.7°	—	—
15	0800	16°55'	105°39'	137.4°	—	—
	1000	16°18'	105°12'	—	27.0°	35 04
	1200	16°00'	104°49'	137.7°	—	—
	1700	15°06'	104°24'	—	27.5°	03 08
	2000	14°34'	? 104°34'	139.7	—	—

long at lat. at 1000, 1600, or 1700 accurate
to tenth of a degree only.

P. DeBenedictis
1964

DATE	TIME	LAT.	LONG.	COURSE	H ₂ O temp.	WIND Dir. Knts
Jan 16	0.800 ^{HST}	12°28.1' N	101°33.3' W	138.1°	—	—
	1000	11°9' N	101°6' W	—	28.4°C	06 09
	1200	11°40'	101°00.0 W	139.5°	—	—
	1700	10°48'	100°24'	—	27.7°C	05 17
	2000	10°20.1'	100°01.0'	143.5°	—	—
17	0800	8°12' N	98°24'	143.5°	—	—
	1000	7°30' N	98°0'	—	28.4°	09 19
	1200	7°35' N	97°41'	141.3°	—	—
	1700	6°42' N	96°54'	—	28.9°	13 06
	2000	6°04'	96°30'	142.4°	—	—
18	0800	3°59.0'	94°39.0'	140.0°	—	—
	1000	3.5°	94.2°	—	28.3°	13 02
	1200	3°15'	93°54'	139°	—	—
	1800	2.4°	93.1°	—	27.1°	17 10
19	0600	0.5°	91.5°	—	25.8	15 08
	0800	0°11.2' N	91°17.5'	138.5	—	—
	1200	0°16.2' S	90°59.2'	283.1	—	—

P. DeBenedictis
1964

SHIP POSITIONS GALAPAGOS TO GUAYAQUIL, ECUADOR

DATE	TIME	LATITUDE	LONGITUDE (?)	COURSE	M ₂₀ TEMP.	WIND
FEB 28	2000 C	0° 55.4' S	93° 55.7	var.	—	—
FEB 29	0600	1.4° S	88.2	—	25.0	12 12
	0800	01° 30.5' S	87° 52'	var	—	—
	1200	1.6	87.2	—	25.0	15 10
	1800	1.8	86.0	—	24.7 24.0	13 10
MARCH 1	0600	2.1	84.1	—	23.9 23.7	14 12
	0800	2.04'	83° 50.5'	98.2		
	1200	2.1	83.2	97.5	22.1	17 12
	1900 HA	2.2	82.5	—	22.4	19 09
MARCH 2	00	2.2				

GUAYAQUIL TO COCOS ISLAND.

MARCH 6	0000 E	11.5° S	81.5°	—	25.5°	23 09
7	0050	0° 30' N	83° 25'	—	—	—
	0060	0.7°	83.6°	—	27.6'	18 14
	1200	1.9°	84.2°	—	27.9	19 12
	1700	2° 51'	84° 55'	—	—	—
	1800	3.1°	85.1°	—	—	—
8	0500	5° 12'	86° 38'	—	—	—
	* 1700	5° 33'	87° 02'	—	—	—

* at anchor, Cocos Island, Costa Rica

DeBenedictis
1964

SHIP POSITIONS - COCOS ISLAND TO SAN DIEGO, CALIF.

DATE	SHIP'S TIME	LAT	LONG	H ₂ O Temp.	WIND.
MARCH 9	* 0500	5°33' N	87°02' W	—	—
10	0530	6°54'	88°52'	—	—
	0600	7.0°	88.7'	28.2°C	31° 4'
	1200	7.7°	89.6'	28.2°	36° 11'
	1700	8°15'	90°07'	—	—
	1800	8.3°	90.6'	28.2	31° 17'
11	0500	9°45'	92°22'	—	—
	0600	9.9°	92.5	28.3	03 12
	1200	10.8°	93.7	27.8	04 21
	1700	11°25'	94°30'	—	—
	1800	11°5°	94.5	28.6	04 3 7
12	0500	12°50'	96°23'	—	—
	0600	12.7°	96.4	28.2	03 19
	1200	13.7°	97.5	28.6	07 18
	1600	13°50'	97°48'	—	—
	1700	13°9°	97.9°	28.6	09 7
13	0430	15°13'	(?) 99.8	—	—
	0500	15.3°	99.8°	28.2	03 17
	1100	16.2°	101.1°	28.0	34 9
	1600	16°38'	101°30'	—	—
	1700	16.7°	101.7°	28.3	28 7
14	0400	18°04'	103°38'	—	—
	0500	18.2°	103 103.8°	24.5	32-8
	1100	18.9°	104.8°	25.6	31 10
	1600	19°19'	105°22'	—	—
	1700	19.4	105.5°	23.9	32 12

* at anchor. Chatham Bay, Cocos Island

P. DeBenedictis
1967

SHIP POSITIONS
COCOS ISLAND TO SAN DIEGO, CALIF

DATE	SHIP'S TIME	LAT	LONG	WATER TEMP	WIND
MARCH 15	0400	20°36'N	107°10'W	—	—
	0500	20.7°	107.3'	23.3°C	33 14
	1100	21.7°	108.7°	21.2°	32 12
	1640	22°30'	109°38'	—	—
	1700	22.6°	109.8'	20.7°	30 10
16	0400	24°41'	111°48'	—	—
	0500	24.3°	112.0°	18.9	23 06
	1100	25.3°	112.4	18.6	32 15
	1500	25°55'	113°32'	—	—
	1600	25.8°	113.4°	17.0	28 17
	2000	26.9	114.4°	16.7	33 25
17	0400	27.8	115.3	15.6	28 05
	1000	28.9	115.7	15.6	17 10
	1600	29.9	116.1	15.1	18 11
	2000	30.8	116.4	15.6	19 08

P. DeBenedictis
1964

Birds seen from T.S. "Golden Bear"
San Francisco To Galapagos.

①

DATE: JAN

Species:	10	11	12	13	14	15	16	17	18	19
Loon, sp.	15-20	1								
Fulmar	7-800	10 ⁺	4							
Brant Cormorant	10	2								
Black Brant	50									
Larus glaucescens	50	10								
L. occidentalis	150	1	10							
L. argentatus	5-10	20	50	2						
L. californicus	5-10	5	5							
L. delawarensis	1-5									
L. canus	15-25	10								
Rissa tridactyla	10-15	150								
Common Murre	50-75									
Rhinoceros Auklet	2-300	4								
Diomedea nigripes		4	2							
Puffinus ?griseus		2		1						
Brown Pelican		40								2
Larus philadelphia		30	1							
L. heermanni		4								
Parasitic Jaeger		1				3				
Pigeon Guillemot		1								
Ancient Murrelet		1								
Cassin's Auklet		1		1						
Puffinus puffinus			2	1	2			1		
Black Petrel				50	2	1				
Leach Petrel				2	50		8	1	15-20	
Xantus' Murrelet				2						
Phalarope sp. (not Wilson)				2		(? Red) 12				

R De Benedictis
1969

(2)

DATE : JAN

Species	10	11	12	13	14	15	16	17	18	19
Frigatebird.			2		1	45				12
Sula dactylatra					1	1 ⁺	4	1	1	15
Sooty Tern					12	4 ⁺			45	5
Puffinus pacificus						1		15	2	
Sula sp.						50				
Sula neboaxsii						1	1			6
Puffinus carnipes							1			
Phaethon aethereus							1	7 [±]		
Northern Phalarope							70			5x 10 [±]
Pomarine Jaeger						10	5			
Sula sula						5	75	2	3	
Puffinus creatopus								1 [?]		
Oceanites sp.								1 [?]		
^{white rump.} Oceanodroma sp.									15 [±] 15 [±]	
? white bellied storm petrel								1		
Oceanodroma castro									10	10-15
O. tethys										20-30
Oceanites gracilis										10 [±]
Audubon Shearwater										50,000
Red-tailed Tropicbird							1			

1969

BIRDS SEEN FROM T.S. "GOLDEN BEAR"
GALAPAGOS TO SAN DIEGO, CALIF.

[illegible]

P. De Benedictis
1964

BIRDS SEEN FROM T.S. "GOLDEN BEAR"
GALAPAGOS TO SAN DIEGO, CALIF

MARCH

Puffinus puffinus

Pomarine Jaeger

Puffinus creatopus

Larus philadelphia

L. occidentalis

L. argentatus

L. californicus

L. sp.

Fulmarus glacialis

L. glaucescens

Rissa tridactyla

Xantus Murrelet

Cormorant. sp

Diomedea nigripes

Cassin's Auklet

12 13 14 15 16 17 18

2 ~~100~~ 300* 700* 4 400

~~10~~ 10*

~~30~~ 30

~~2~~ 2 20

5 250 200

5 150 15

1 200 25

50 6 2

3 6 45

2 2

1 1

5 ~~10~~

1 75

2 ~~5~~

2

1964

①

10 Jan

Vallejo to Golden Gate Bridge, Calif.

left Vallejo at 11 sharp as the schedule demanded
~~around~~ the Golden Bear for the Galapagos
 with the rest of the expedition. It was a clear,
 but breezy, cold day. The bay very flat. Not
 much apparent around the California
Maritime Academy, who runs the Golden Bear;
 only a few West Gulls and West Grebes.
 We went out through the Concise Sts
 and then out the W side of San Francisco
 Bay just E of Angel Is. At the N end
 of San Pablo Bay (off Hwy 47) there was
 a large raft of duck, mostly hesser Scaup,
 with some Scoters, Western Grebe & 2 Red
th. Loons. about 35-50 New Gulls followed
 the boat, with 1 2nd year Ring Bill. About 11:30
 at lunch and came out, to find that
 almost all the gulls following the boat are
Westerns, with a few Glaucous-wing, Casp &
New. No many duck, mostly Surf and
White-wing Scoters. A remarkable # of Loons,
 1 Red-th., 1 Arctic, 2 Common, 15-25 unidentified.
 Also about 25 Western Grebe, ¹⁰⁻¹⁵ ~~10~~ Bonaparte
Gulls, and during the fire drill I saw a
 small Alcid, probably an Ancient Murrelet.
 Out through the gate almost nothing to be
 seen through the Golden Gate but with the
Western Gull there were about 15 Fulmars,

P. DeBenedictis
1964

(2)

10 Jan

onboard "Golden Bear" off San Francisco + San Mateo Co. Calif.
3 of which were light phase, the rest intermediate
(dark). Not stocked. Calif. (1 or 2), Western,
Herring (3-5), Glaucous-winged (10±) following
the boat, may be a few more. Saw all (see
films before 2:10 P.M., and then didn't
see much except the gulls/chickens the boat until:

2:50 2 dark phase fulmar - N - separate.
15 Common Mur

3:00 1 dark phase fulmar - S -
20 Mur

3:10 5 dark Fulmar - 3 N, 1 S, 1 W

3:15 2 dark - 1 light fulmar -
due W of Half Moon Bay.

3:20 6 Murres - mostly plumage
12 fulmar, 3 Hecks, 2 light, rest medium
most are medium - tan with
good wing patches

3:35 10 Mur
1 Kittiwake (adult)

250-300 Fulmar - 45% light phase,
40% medium, rest very dark.
- most just off Half Moon Bay.

3:50 - went through raft of ~~150-200~~
Rhino Auklets - 100-150 near Fulmar,
about 75% slightly more dark/intermediate
only 15-20 Murres. Saw 1 Murrelet
adult.

10 Jan

on board "Golden Bear" off San Mateo Co., Calif.

Very windy & cold on the ocean; not many white caps but the boat is moving back & forth quite a bit. Until about 5 PM ~~saw~~ about another 200 fulmars, over 75% dark or intermediate phase. Saw 1 eating a brown jellyfish (? Chrysaora) and may have flushed a second away from ~~the~~ ^{eye}. Most of the light phase birds are together, so that one sees the a lot and then mostly dark birds. Birds moving singly, in flight or on the water, and often can be seen looking into water.

Only interaction was a light bird which swam towards the dark bird eating the jelly fish. Shortly south of Half Moon bay we went through a large feeding assemblage of gulls (10⁺ Kittiwake, a few black tips), 100⁺ Fulmars, 150-200 Rhinoceros Auklets, 25-30 Mews, and a few large gulls. South of here for about half an hour we saw Rhinoceros Auklets almost constantly, with the exception of Fulmars, but thereafter petered out and all alcids were very scattered. Towards the end of the day, ~~saw~~ ^{saw} almost only fulmars and most of the gulls disappeared, except that a few Mews had appeared, plus a Ring-billed Gull and a Calif. Ho Puffin and no Storm Petrels.

1964

11 Jan.

on board "Golden Bear" off San Luis Obispo Co., Calif.
Last night about 10 went out to see the phosphorescence. Porpoise coming in were very conspicuous + beautiful, and schools of fish constantly in sight. Beautiful clear, cold night. Awakened by the noise about 6 A.M., and after breakfast went up to the bow to see what was about. We are almost out of sight of land and the sky is moderately overcast. Windy but not as much as yesterday. Figure I was out from about 7:45 to 9 A.M. Birds were very sparse (mammals - 5 or 6 porpoise (sp.) even rarer), and except for the gulls following the boat most single. Saw 2 feeding assemblages, one of c. 25 Brown Pelican, 50 Kittiwakes and Bonaparte Gulls, and a few larger gulls, and the other of half a dozen Kittiwakes. Many of the birds we saw commonly yesterday are very scarce now, but others are much more apparent. The only thing in flocks together are Pelicans and gulls. During the 1½ hr or so we noted 1 Loon sp., flying N, high above the horizon; 1 Black-footed Albatross (followed the boat for about 15 mins about 7, apparently others saw one or two more. This was a black-vented bird), 4 Fulmars - all very dark phase, 1 (Sooty) Shearwater - with the large feeding assemblage, very white

1964

11 Jan

on board "Golden Bear" off Channel Is., Calif.
under the wings). 50-75 Brown Pelicans -
besides the feeding group, flocks of 3-7 were
seen often; 2 Cormorant (? Brants'), 1 imm.,
1 adult for off.; 10 Glaucous winged gulls;
5 Western Gulls; 25-30 Herring gulls; 10
Calif. Gulls; 10 Mew Gulls; 20-25 Bonaparte
gulls (all in the one large group); 4 Heermann's
Gulls. (prob. all 2nd year birds, not sure).
25-30 Kittiwakes, about = #s of adults and
immatures. easily recognized by their
light flight though, approached by the Mew
gulls. Most of the gulls followed the boat
and I don't know how often birds were
seen twice, #s built up & fell off
regularly, and occ. the gulls would go
on ahead of the boat. ~~Lesser Frigatebird~~ ^{(Ancient Murrelet -}
very grey-backed, small, white below, flushed
from near the boat), 4 Rhinoceros Auklets,
also flushed from near the boat. We are
proceeding at 13-14 knots, and will get our
position each noon. Also saw a bird that appeared
to be a Pigeon Gull in summer plumage.
Many of the Rhinoceros Auklets have fairly
good head plumes. At 9 went down for the ship
board symposium & remained until the 11:30
lunch. After lunch noted an Albatross
out the window and went up to the

1964

11 Jan

on board "Golden Bear" off Channel Is., Calif.
 how. Between 12:05 + 12:10 P.M. saw 5 imm.,
 1 ad, 3 (age class) Kittiwakes, 1 Alcíd (Puffin
 or Rhinoceros Auklet), 1 Calif.-type gull.

About 8 Herring + 6 Glaucous wings following
 the boat. Nate Cohen came up and I learned
 I had to go below and check with Steve Billett
 about ship-board duties. Saw 1 Fulmar (dark
 phase) and 8-10 Kittiwakes while talking to Cohen.
 about 12:20 cleared everything up and
 came back. Then tried to keep track of every-
 thing except the gulls following the boat.

at 10-5 minute intervals. Between
 12:20 + 12:30 saw: 8 imm + 2 ad. Kittiwakes
 all flying N, 1 R.B. type gull, 1 adult
 Bonaparte's Gull, then also going N.

by 12:35, 1 ad, 1 imm, 3? Kittiwakes (more),
 1 Glaucous wing + Herring Gull, 1 Calif.-type
 Gull, all going north. By 12:40, 1 ad, 2
 imm Kittiwakes, going N, 1 Calif. type gull.
 The last few Kittiwakes were flying very high,
 15-20 feet off the water, but the height seems to be
 correlated with direction of flight - when going
 S they are just above the waves, when ~~they~~ they
 are much higher. Most of them are alone
 but a few groups of 2 or 3 were seen. By 12:45
 2 Kittiwakes S, 6[±] North, and 2 Fulmars,
 one very dark, one intermediate, went by.

11 Jan

on board Golden Bear off Channel Islands, Calif.
by 12:50, 3?, 1 ad, 2 imm Kittiwake, 1 Black-footed Albatross following the boat. The gulls, which seemed to have dropped off, were back but all are Herring, except 1 or 2 Calif.

by 1:00 2 imm + 3-5(?) Kittiwakes went by. Most still going N. About 1:05 went by a group of 6-8 imm. all together + 2 or so separate, and by 1:10 albatross was gone: 1-2 more Kittiwakes, + 1 Puffinus (griseus type)
From 12:05 + 1:10 (hour observation):

54 Kittiwakes; 1 Alcid, 3 Fulmar, 1 Puffinus, 1 Bonaparte Gull; 15-25 Larus sp. (argentatus type). Stayed out until about 2. From about 1:30 on ran in to large #s of Kittiwake, up to 20 in sight at once, and probably about a total of 50. almost all (c. 75%) were immatures, just flying slowly by. The large groups were feeding on the water, not much competition for food and noise of the gulls that New gulls showed in S.F. Bay. All quiet. The large groups were not obviously moving, but most of the single birds were ~~moving~~ ^{going}.

North. Saw one more dark Fulmar, and by 2 P.M. three Black foots (1 white-vented phase, 2 all dark phase) were following the boat. The gulls stay with the boat for a while then drop back to feed & come on again. The

11 Jan

on board "Golden Bear" off Channel Islands, Calif.
Majority are adults, but the ones that aren't
are almost always 1st year birds. Herring seems
to be the commonest species. At 2 went
down to 2nd ship-board symposium, and
remained below until 4. when I came
back up 3 all black Diomedea nigripes
after the boat, remained until about 4:30
or so. Very few birds on the ocean. 1 imm.
Kittiwake going N at ~~4:15~~ 4:15 P.M. 2 imm Rissa
+ 1 ad. Herring by 4:25; at 4:30 a imm.
Rissa + a ~~juvenile~~ ^{immature} phase adult or imm. Parasitic
Jaegei, with small wing flash and fairly light
flight crossed in front of the boat. Jaegei not
obviously after the gull. 1 Brown Pelican
at 4:32 and flushed a Cassin's Auklet
from under the bow at 4:37; 1 gull (sp) + 1
Rissa. A Brown Pelican sitting on kelp
at 4:45, and a Kittiwake went by. no gulls
with the boat. During the next ten minutes
about 5 Larus sp. heading due N, ship
going about SSE at 12-14 knots. Much windier
in the PM than in the early A.M. session.
After about 5 a # of gulls with the boat +
remained to at least 5:30. 3 + imm.
Kittiwake came by and also a Fulmar
which spent sometime in the wake. Albatross,
Fulmar, + Larus the only species that pyramish

1964

(10)

11 Jan

on board "Golden Bear" off N Baja Calif. My attention to the boat but ~~then~~ in the evening we stopped over the slick but then went on. The crew is being secretive about the boat's position but eventually we will be notified. The Porpoise this A.M. were the only mammals noted, and the only fish were seen about 3 P.M. when a # of small fish appeared on the surface and were instantly attacked by the hairs argutatus following the boat. Sometime during the noon period saw a Herring gull sitting on a board c 4" wide + $2\frac{1}{2}$ ft long. Best concentration of birds were the groups early in the A.M. and the gulls about 1:30-2 P.M.

Noon, JAN, $34^{\circ}12'N$, $120^{\circ}30'W$, $\sim 70^{\pm}$ mi. W San Nicholas Is.

12 Jan

This A.M. about 7 when I dragged myself out of bed we were just NW of Guadalupe Is.. It is much warmer now and don't need a jacket to stay on deck, just a sweat shirt. The sea is calm here and there seems to be a fair breeze (from what direction?) but absolutely no birds of any mention. We mainly saw 3 Fulmars, and a few - 10-~~40~~⁵⁰ Herring Gulls are with the boat. Almost no birds on Guadalupe Is., and only saw 10-15 Western Gulls + 1 ad. Bonaparte's gull flying N along the slick ~~but the~~ ^{left by} some long gone

12 Jan

on board "Golden Bear" off Guadalupe Id., Mex.
Island. Guadalupe is a very barren looking island.
The sky was almost clear, and the only
sign of fog was a small bank at the
end of the island up against the steep end
the N end is a sheer cliff, extend in an E-W
ridge out from the main mass of the island.
little bird lines on the cliff. On top it is
evidently grassy and on the higher part, there
are a # of scrubby looking cyprus. There
seems to be a shallow beach at the base of the
~~the~~ ^{east} side of the island, rocky, and at the NE
part it may be fairly wide. A gully runs down
to the bottom and here there is a small settlement,
and a green bush (Nicotiana according to Dr.

Bartholomew) grows here; he also said
the main Elephant seal rookeries are here.
The trees grow along the coast of the island,
most of the ~~the~~ ^{east} side being quite barren, giving
me the impression of the E side of the White
Mts. Took 3 or 4 pictures, the last of two very
interesting cinder cones, a # of which are
conspicuous ~~on~~ the island. The heaviest patch
of wood is evident right about this area;
the trees green, mostly oak-shaped except for
one in the shape of a Lombardy poplar; the trees
at the N end are all cypresses (Montezuma type shape).
The S end of the island is completely barren,

1964

12 Jan


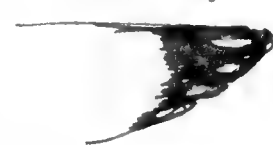
on board "Colden Bear" off Guadalupe Id., Mex.
except for what ever low vegetation that might be present,
and mostly bounded by steep cliffs. Highest part
looks like an eroded volcanic plug. So of the
main island are two small, steep walled
islands rising 4-500' out of the ocean; look
like the much eroded plugs of old volcanoes.
Dr. Bartholomew says pelicans nest here, but
certainly no sign of them now. No Mammals,
and, in fact, none since yesterday A.M. As we
pulled out from the island, saw a Morro
Shearwater cross the wake of the boat, & a
fairly light Fulmar followed the boat for some
time before heading off. We picked up
a white-vented Dionedia nigripes, with
white upper & lower tail coverts, about 7-7:30
and a bird resembling this was present until
9 and at noon⁽³⁾ it and an all black bird were
following the vessel. About 20 Herring and
1 ad. Calif. Gull following at noon. From
noon until 2 saw no birds from the boat.
30⁺ Herring and 5⁺ Calif Gulls following the
boat & 2 Dionedia nigripes, on prob. the same
bird from 7 this A.M. when garbage is thrown
over, all the gulls & the albatross come in and
land, but the albatross is bores. It sits with
the wings just up & held over the back, neck up
and bill horizontal and unfolds the wings

12 Jan

on board "Coddler Bear" off central Baja Calif. Mex
when it moves.



— sitting posture.

most of the gulls just circle over it and occasionally
one will land near by. far more interesting to
watch the birds following the boat—getting goose
at telling. Cull & Herring gulls adult from
below — Cull has black mark on bill & a
diff primary pattern:  vs.  and
just a red spot on the bill.

People beginning to get bored from lack of exercise
and walks about the deck are becoming more
and more frequent. Poor Dr. Orr hasn't yet
seen a mammal. Dr. Hendrickson began
to point out flying fish, but only about a
dozen seen. it is a deep blue + white
species with trout, bluish fins & a pointed,
elongate lower tail fin. Dr. Bartholomew
later told me there are always this few birds
around. Robert Pyle and I have been trying to
make a regular check of the birds, one at 7-8 a
m, 1 at 12-1, and 1 at 4:30-5:30. Symposium
session ^{ryhetu} ~~afterwards~~ gives anyone a chance to sleep.
Lots of people watching birds — Drs Miller, Amador,
and Bowman from the stern, Dr. Bartholomew,
Hendrickson, and Orr from the pont. Putting off
from Dr. Carpenter and Charles Bille ~~spend~~
most of their time ~~trying~~ to discourage us from going.

1964

12 Jan

on board "Golden Bear" off cent. Baja Calif. Mess
 spend most of the time on the bunk. Party al-
 ready divided pretty much among botanist,
 geologist, invertebrates + vertebrate zoologists.
 geological + vertebrate zoologist + forest. Stepping
 Now making up a certificate for the crew.
 One of the crew apparently down with chicken
 pox and food only knows what will happen to
 the proposed landing time! After the symposium
 went up to the bow. Only 3 Herring Gulls follow-
 ing the boat & nothing else except 2-3 fly-
 fish to be seen. Position at noon today,
 $28^{\circ}20.5'N$, $117^{\circ}25.5'W$, = ~70 mi. SE Guadalupe Is.
 Went out about 4 to look at the phosphorescence.

Almost none. Wonder if this indicates a general
 unproductivity of the water & \therefore the lack of vertebrates
 during the day? the calet on watch thought
 the water wasn't "brown enough" for phosphor. Will
 have to see if there is a future correlation. Now in
 the evening going through an interesting procedure
 the boat is limited & everyone is ~~trying~~ to divide
 up the use so everyone can get what he wants.
 I'll probably spend 1-3 weeks near Pt. Espinosa. The
 Marine Zoologists are arranging an "out island
 tour" and I don't know what the botanist + geologist
 have planned. Learning much about the island
 from Butler and Carpenter - most of this to be
 related on the trip back when I can give MY opinion.

1964

13 Jan.

on board the "golden Bear" off Baja Calif. Sur. Mex
much warmer and calmer this A.M. but the
birds started out very much the same as last night.
I watched from about 6:30-7 and 7:30-9 AM.,
mostly from the bow. During the first session
saw 2 "Xanthus" Murrelets, at at the very ^{start of} ~~beginning~~
the period, one at the very end, a 1st year
Herring gull which stayed around only for
10-15 minutes, and a all dark Puffinus
shearwater. A few flying fish about. After
break fast very little about until about 8:00
when Dr. Orr spotted a ♀ Fregata magnificens
circling high in the E horizon. Bird approached
the boat. About 8:30 learned there were some
petrels following the boat and went back to see what
was there. About 6-8 Black Petrels were following
about 200-300 yards and farther behind the
boat, showing a low, deep wing stroke and
alternating with a glide, wing pointed down.
Stooped stiff like a black Tern. Hard to judge size.
When garbage thrown off the boat the petrels would
congregate about the floatow, alighting on the
water, usually for only a short period of time, and
often with the wings only half closed. They cross back
and forth across the slick behind the boat & seldom
come as close as the turbulence from the propellers.
A lot of the ~~speculation~~ ^{speculation} becoming bored with the lack
of organisms to be seen but still good attendance

1967



13 Jan.

on board the "golden Bear" off Baja Calif. Sur. Mex. at the symposium. Don't need my jacket (but do my sweatshirt) anymore. The 1st session got out at 11:30 and went back for a while but only 1 or 2 Black Petrels and an adult Herring Gull with the boat. Got a bit of glimpse of a white-rumped petrel (with Dr. Bowman, possibly 1 or 2 others) before 9 A.M. Went to the bow but very little there. Shortly after lunch no petrel obvious. Saw a hammerhead shark at least 12 (up to 18) feet long resting on the surface. About 1 went back & watched the petrels. 6-8 Black Petrels plus one or 2 smaller dark and a same-sized white-rumped petrel, which followed the boat for 15+ minutes. It is about $3/4$ - $7/8$ size of the Black Petrels, same color with even tail band; the wing beat is deep but faster and the bird glides less; mis-covers like the black petrel. The Blacks land very infrequently and always briefly & with the wings up. About 1:45 another 1 Frigate bird when by, paying no attention to the boat. The Herring gull is staying way off from the boat. Went down for the second symposium but it got much too hot in the hold, so came up after the 2nd paper & found out from Dr. Bowman that there was a conspicuous macroplankton to be seen. Went out to see a small ¹⁻²" long) myctophan with long red claws (*Platycodon*)

1964

(17)

13 Jan

Boored the "Golden Bear" off Baja Calif Sur, Mex.
 floating on the water. From the bow they are
 seen floating on the top of the water and
 submerge at the approach of the boat. A small
 silver-colored fish can be seen, leaping from
 the water, and the crustacean is very
 abundant - some groups of 35-40 / ~~ft~~²
 seen, most about $\frac{1}{4}$ to $\frac{1}{5}$ this density. Saw the
 first groups (top 8-10, 1 of 6) flying fish,
 looks the same as before. No gull. At 4:30
 to 5 no ~~petrel~~ with the boat, but after 5:30 to
 as dark as I could see a group of 12-20
 Black Petrels followed the boat, coming closer as
 it got dark. The caudals are very interested
 in the zoo plankton and tried to catch some
 in a ~~bucket~~ bucket, but succeeded only in bringing
 the bucket. Later a caudal used a net with
 his lamely rag but the boat is going so fast
 - 14 $\frac{1}{2}$ knots) that the net wouldn't get under water.
 Ted Pappas spotted a whale and through
 the binoculars I could see 4' high dorsal
 fin  - no color - killer whales. From
 the bow spotted a group of 40-60 porpoise
 feeding in a flock, jumping from the water. They
 seemed to be sharp-nosed, one type was all
 black and the other  but way too far off
 to see any detail. Dr. Bartholomew saw things
 the latter might be and had no gun





13 Jan

on board the "Golden Bear" off Baja Calif. Sur., Mex.
on the other (he didn't see them). With these were
about 157 Black Petrels and a white bellied
Puffinus, probably Black-vented. First I tried to
judge size now. Two other things seen at
noon - a probably Cassin's Auklet -
small alcid with a dark throat - and 2 Red
or Northern (not much sharp wing but poorly seen)
Phalaropes. In the evening there was a lecture
given for the crew of the "Golden Bear" by the expedition
Cool at ~~night~~ ^{took off}. ~~Lost~~ my sweat shirt after for.
Very ~~cloudy~~ ^{cloudy} around the horizon at night &
get dark very soon after sunset. At 2 P.M.
all clocks moved forward 1 hour so
there was no 23 P.M. period today. Position at
noon was: $24^{\circ}14'N$, $113^{\circ}07'W$. at 8 A.M.
 $25^{\circ}N$: at 4 P.M. ~~was~~ $24.00.9'N$, $112^{\circ}44.2'W$
= n 50 mi SW Cape San Lorenzo. No phosphorescence
during the night.




~~14 Jan.~~
14 Jan.

The next am crawled out of bed about 7 and went
out to see what was following the boat. A male
Frigate bird circling far behind the ship but nothing
else in sight. It is very much warmer and more humid
now; looks like it will rain. After breakfast went out
and from the back of the boat saw an imm. Sula
dactyla which appeared from nowhere, circled
the boat a little & took off. grey bill & feet, white
body; dark wings; molting the upper wing coverts.

14 Jan.

on board "Golden Bear" off S. Baja Calif. Mex.
flies very stiff-winged and glides a lot. Not
much else until the meeting nearly began. The
session this A.M. was much more interesting than
usual; got away from the biogeography and started discussing
of some of the problems of the islands. After the session
saw 2 Leach's Petrels flying along side the boat. Dr. Orr
later came back and said he had seen Petrels and a Shearwater
from the bow. Went forward and eventually saw
about 15 Leach Petrels. They were usually in open
groups, 3-5 together, with exacting single birds near
by, and the flock 10-15 minutes apart. One
Mann Shearwater from along side; The Leach Petrels
are mostly clear white rumped  (ant), one with
a divided rump patch  (ant) and one with a brown
rump  and show a tanish bar on the greater
secondary coverts. The flight is very light, with
deep (9+ inches) ~~deep~~ wing beats & glide with down-beat
wings; circle about a lot & remind me of Cliff Swallows.
Almost no (zoo) plankton ~~available~~ ^{visible}, and only 1 or 2 flying
fish. After lunch about 10 Leach Petrels following
the boat, crossing the wake frequently. They feed very
infrequently, settling briefly on the water with the wing
up  and sit only for 2-3 seconds. They often come
over to investigate but seldom land; usually they do
when there are orange peels with the trash. Don't
eat the peels but ~~they~~ ^{they might} be after something attracted
to the orange peels. When they pass over the wave crests

14 Jan

on board "Golden Bear" of Baya Calif. S.W. Mex.
They seem ~~to~~ dip down much in the manner of a swallow
gathering mud or drinking. If they are feeding they
are eating ~~this way~~ ^{this way, they are} taking something, kicked up
by the propellers. From the bow saw a group of 7
white rumped Leach Petrels and 2 petrels which
sat on the water ~~with~~ ^{with wings} folded down, floating high
on the water. Saw 3-4 jellyfish. By about 2 PM
there were 20± petrels, all Leach following the boat.
The afternoon symposium was short and got up
about 3:30. There was a great cloud of ~~30±~~ ^{30±} petrels
following the boat, all but 1 Leach's. A Black
Petrel which offered good comparison. The wing beats are
much deeper, and they tend to glide quite a ~~bit~~ ^{bit} between
separate wing strokes and longer between beats of strokes.
~~It stays~~ ^{It stays} much further back from the boat than the Leach's,
which come within 50-75 feet. The size difference is very
conspicuous. From the bow saw 2 Booby Terns,
which I first identified as a Frigatebird, circling
high over the horizon & then ~~fly off~~ ^{to the W} as we ~~approach~~
approached. Didn't get a good look. Also saw 3-8 porpoise,
uniform dark olivaceous , slightly lighter below,
moving N & paid no attention to the boat. When I
went back to the rear of the boat about 4:30 only
about 10-20 Petrels following. They seem to have two
sorts of wing beats, a deep, arch  = body lengths,
and a high arch  which were given more rapidly
as the bird turned and dropped (? after food.) Couldn't

P. DeBenedictis
1964

(21)

14 Jan

on board "Golden Bear" off western Mexico.

make much if any correlation between feeding & the wing beat types but the deep strokes seem more often as they settle near the garbage dropped. ? feeding signal. Otherwise the different birds don't pay much attention to each other towards the end of the day most of the petrels had dropped off but about 5:10 PM saw a flock of 10 Sooty terns circling high above the water; flew off to the west as the boat approached, as before. Very little marine life - only 1-2 flying fish and almost no plankton. Position $21^{\circ}0'N$, $109^{\circ}30'W$ at 8:30 AM, $20^{\circ}20.5'N$, $108^{\circ}57.0'W$ at noon, ≈ 130 mi. W Cape Corrientes, Jalisco, Mex. In the evening Charles Carpenter showed his film of the Islands; very beautiful but wonder how many parties decided not to go where they had planned. The country looks dry, barren, and rough! Still no phosphorescence.

15 Jan.



This A.M. started out as a complete washout! a little windier and cloudier than usual & looks like it will rain. Nothing following or near the boat - didn't see a bird until nearly 9 AM when a Frigatebird was spotted far in the distance. Very little to be seen in the ocean. The flying fish seem to be different, a smaller darker species with black transparent showing the H₂O through the fin). Everyone notices the dullness of the day. The first symposium session (insects) was very unpleasant due to heat and humidity; slept through 2 of the

P DeBenedictis
1964

(22)

15 Jan

on board the "Golden Bear" off central Mexico.

3 flocks. Afterwards we greatly went up; few birds about but a squall was evident. We first saw a imm. Blue-faced Booby, like yesterday, and later another frigate bird. About 11:00 it became obvious we were going to go through a squall, but the birds became quite varied. Saw 1 or 2 undistinguishable Sails and 3 Parasitic or long-tailed Tanager about 11. About 15 minutes later we went through a big group of birds, of which I managed to miss most. About 15 Frigate birds, 4 Sooty Terns together. Then we flushed a Wedge-tailed Shearwater from the water. It got off with a stiff wingbeat unlike the other Puffins we have seen. Brown phase with a conspicuous pale area on the greater secondary coverts; tail shaped like a booky -  - and easy to see. Most of the birds were right along the area where the wind cooled and shifted as we went in to the squall and no birds actually in the storm area. Went for lunch when it began to rain (11:30) and got back a little after noon. About 12:10-12:15 a ♂ Frigate bird circled the boat, inflating the throat pouch occasionally. Noting the secondary & inner primaries & 1 tail feather. Conspicuous tail shaking in flight, and the un-inflated throat pouch is easy to see in silhouette .

1964

(23)


15 Jan

on board the Golden Bear off central Mexico.
 earlier, about 11, when I went to the bow saw a
 Blue-footed Booby, (~~Black~~ tail and wing, mottled
 brown + white back, white below) circling the bow
 of the boat. about 12:30 3 all brown Boobies
 with greyish bill + feet circled the boat. Primaries
 (? Secondaries) much tail darker. Also saw one that
 was paler on the ~~vent~~^{belly}, not very sharply set off.
 ? imm. Red-footed Boobies. Circled the boat for
 a short while then flew off. About 1 P.M. noticed
 a Frigatebird chasing a booby (sp.). and with the
 glasses could see 2 more frigate-birds. Scanning
 the horizon found a group of about 25 Boobies,
 not obviously feeding, and about 35 Frigatebirds
 circling high overhead. They paid no attention
 to the boat at all. Had a meeting at 1 but after
 about 5 minutes this was interrupted by a fire
 drill. Saw a Black Petrel flying along side the
 boat and a (? Jaeger) which glid stiff-wings &
 quite a bit. The meeting went on to the symposium
 which was somewhat more interesting though unbearable-
 climate wise - which lasted to 4. Still nothing with the
 boat, and not much to be seen. There seem to be two
 types of flying fish, one with very large pelvic fins,
 the other with smaller pelvic fins. Saw another of the
 brown boobies. About 5 spotted a # of (?) tuna leaping
 out of the water; shortly before saw a Pomarine Jaeger.
 just after 5 a Pomarine Jaeger and a Pale-

P. DeBenedictis
1964

~~1964~~
(24)

15 Sun

on board the golden Bear off central Mexico.
Footed Shearwater (larger than the jaegers) flew across
the bow, circled about and dove into the water
once. The bill was pink and it 3 or 4 times lowered the
feet, which were also pink. The back was more uniformly
colored, the flight feathers a little darker, than the rest,
and the tail was broadly rounded , felt rather
almost to the tip. ^{Wing beats very slow & loose jointed.} A dark Red-b. tailed Tropic Bird with
good tails flew over the boat without paying any atten-
tion to the boat. Bill very red, and flight strong and
steady. about 10 minutes later we saw 2
Pomarine Jaegers together, then 1 with tails,
then 3 together and finally 1 alone, which showed
a ~~white~~ ^{white} patch on the secondaries. All are in a
white bellied, dark plumage, and fly low and
pretty much solitarily. About 5:30 a single
dark booby like we have been seeing during the day.
The brown color of the belly is very uniform and the bill
is a greenish grey. In the evening we had a delightful
meeting covering tips on the islands and unloading.
We have 50-75 tons of material to bring into no
harbor, with ~~no~~ ^{at best} uncertain prospects of land-
ing. This promises to be most conical in about 4
months. 3 main trips organized, 1 to Fernandina,
1 to Hood, and 1 a general tour of the islands.
Position at noon $16^{\circ}00'N$, $104^{\circ}49'W$, equals 150
miles south of Manzanillo, Colima, Mex. Got
some other dates (on table) from the log. via Bob Pyle.



16 Jan.

on board "Golden Bear" off southern Mex. coast,
got up about 6:30. a ~~clear~~^{warm}, humid, sunny day, scattered,
low fluffy white cumulus clouds + light wind. looks like
everyone will get burned today! about 6:45 spotted 3
of the brown colored boobies flying along side the
boat stayed with the boat for about 10 minutes. Uniform,
primaries a little darker than the secondaries. About
7 a mixed adult Red-billed Tropic bird showed up
over the boat and stayed for a while - about 5 minutes
later a bird with a white steep and all white -
primaries appeared. no nape mark but black about
the eyes. feet & legs black, bill light. The tailed bird
called a few times, a short and explosive, rough,
high-pitched "nyack!" also saw a small dark petrel,
square or fork tailed, which flew with a rapid low
wingbeat and much less gliding; stayed
off the bow for several minutes. at about 7:15 about
7:30 saw 3 boobies far out and 3 close in. The nearby
birds dropped the feet showing the red-color, so they
are Red-footed, all brown (black-tailed) phase. ^{a few} about
minute later we saw 3 (2 adts. + the white bird)
Tropic birds together. The white bird calls a rough,
mod. high pitched "urrrrnyack" a little lower than the adults.
Stayed until about 7:45 although the adults disappeared
sooner. about 8:15 found a Pomarine Jaeger, imm.,
flying fairly high along the boat, and 2 more Red-
footed Boobies, brown phase, about 8:20 - 8:25. about
8:30 2 adult Red-billed Tropic birds appeared and

16 Jan

on board "Golden Bee" off southern Mexico
were seen to live on the ocean, floating boyantly. The wing
beat is strong and steady, circular, very like a Booby.
Not gull-like, especially, about 2-3 beats/second. Often
tied down. Tail stiff. Meeting about 9 A.M. Carpenter
gave the most stimulating talk of the series. Got out about
11:30 and went to lunch. began observing about noon.
Saw a dark rumped leach Petrel about noon, fluttering
near the front of the ship. about 12:15 saw 4 Red-footed
Boobies and later 4 Pomarine Jaegers, all in imm.
plumage. About 12:20 a single immature flew past
the boat. About 12:40 we flushed 2 Red Phalaropes
from the water & saw 1 floating nearby. Shortly after
we flushed 9 more so that there were 11 in sight at
once. A group of 15-20 Red footed Boobies came
past and spotted what seemed to be a imm.
Blue-faced Booby sitting on a board; at the same
time saw another Red Phalarope on the water.
About 12:30 saw a leach Petrel with a clearly
divided white rump patch. At one we had
a man-overboard drill. this involved tossing a
life raft and a red smoke marker overboard
and stopping the boat, for about an hour. almost as
soon as this took place a group of about 40 Red-footed
and what looked like an imm. Blue-footed Booby
came by and appeared to investigate; most of this
junk stayed by the whole period. The Red foots were
somewhat irritable, as far as ~~water~~ ^{closer}, but all are

16 Jan

on board "Golden Bear" off southern Mexico.
uniform dark on the back. The Blue-footed was
very mottled on the back, grayish on the head, white
below, dark wings and tail. About half way through
an adult Masked Booby appeared, about the
same size as the Red foots and towards the
end of the hour 2 imm. were present. Also spotted
about 70 Phalaropes on the water and we came
near enough a flock of 28 to see the back stripes and
to hear the "kik" call of Northern. Most of the birds
were ~~feeding~~ on the water and didn't appear to be
feeding. About 12 a light (not white) rumped Leach
Petrel appeared and lit on the water, mostly with
wing up position, it appeared to be struggling with
something but I couldn't tell what; it fluttered
on the water for a while but was unable to get off,
for about a minute for the last day and a half
we have been seeing the Marine water studies, Halo-
bates. This small insect floats on the surface and
may be the food of the petrels. A Ridgely turtle,
was seen floating on the surface near what appeared
to be a kelp holdfast ~~with~~ some filaments attached;
it appeared to be nibbling of the filaments 
There are two or three types of flying fish about. one
has the pectoral fin marked as:  transparent,
and is larger than another species with ^{wh. fin} _{blackish}
none or a very small pelvic fins. These are present
in large ~~flocks~~ ^{schools}, 30±, now, and can be seen from

16 Jan

on board "Golden Bear" off southern Mexico.
all parts of the boat. A large school of porpoise, too
far off to see any details was seen during the early
part of the drill. This was most interesting, and
somewhere along the line something was dropped
so the racks had to go back and pick ~~steps~~. At two went
back to the symposium meeting; very hot and fell asleep.
At 3:30 got out - saw 3 Red-tailed Tropic birds and
a glimpse of a petrel (sp.). About 4:10 a Red-footed
Booby flew ~~up~~ ^{by}, showing the red feet; another is
sitting on the mast, there for c. half an hour. Near
ran over a beach Petrel with an undivided wing
patch. a few ~~minutes~~ ^{two} later ~~two~~ Red-footed Boobies came
by. About 4:20 saw another Leach's Petrel
flying near the stern at some distance e. Next bird
was a Red-footed Booby at about 5. The bird on the
mast remained until at least 5:35; and maybe
longer. Preening a lot. Everyone bored in the evening.
Noon Position: $11^{\circ}40'N$, $101^{\circ}00.0'W$, ≈ 300 mi. S
Acapulco, Mexico. The abundance of flying fish
and the absence of birds in the ocean here suggest that
this may be the sort of situation where flying fish arose.
The absence of aerial predators for the great
majority of the time gives the fish a chance to escape
an immediate threat, and some flights are
sufficiently prolonged to be of considerable survival
value.

17 Jan.

on board "Golden Bear" en route to Galapagos Is.
overcast, warm, muggy this A.M. Rougher than
yesterday. Woke up, partially. Think the tropics are
beginning to get me. Between 6:30 and 7:05
saw 1 Red-footed Booby, flying far off from the boat,
storm petrel (sp.), and a white-rumped petrel. The
Red-foot is still on the mast. About 6-8 shearwaters
(Puffinus) appeared along the boat, flying 11 and
along the bow, sometimes getting quite close. In
the wind, they have a light, almost jaeger
like flight, a loose motion of the wing, and hold
the carpal joint bent. Long tailed
and slender billed. They are brown
above, white below, the margin
of the wing brown, as are the axillaries
and face. The greater wing coverts are very pale from
a band like the storm petrel. Think it is P. pacificus,
light phase. The tail is not as wedge shaped as the
bird seen before, but molt on the wings is conspicuous.
At breakfast at 7. from 7:30-7:40 saw another of these
shearwaters, a white rumped storm petrel, and a
Leach's Petrel on which the divided rump patch was
conspicuous. In the distance saw an imm.
Sula dactyla; mottled above and on the wing coverts,
white below. Between 8:15 and 8:40 saw 4 more
of these Puffinus, plus a definite ^{Mann} type,
almost with a "Wedgetail". It was ^{noticeably} smaller
and blacker on the back. Wings held straight and



DeBenedictis
1964

(30)

17 Jan


on board "Golden Bear" en route to Galapagos.
beat faster. Saw 5 white rumped Oceanodroma,
twice 2 together, too far off to be sure of. 1st
session at 9; very telling what they think they
will do on the islands. Booby still with us. Notable
to do much at noon. Sleepy. Saw another "Wedge-
tail" at noon; not all show clear pale wing coverts
above; 2 have all dark wings and one a trace of the
wing bar. By 12:30 the Booby was gone. Saw
2 white-rumped Oceanodroma ~~then~~, and
another about 5 minutes later. Didn't see
much else. Noon position: $7^{\circ}35'N$, $97^{\circ}41'W$.
So muggy and noisy that we held the meeting in the sleeping
quarters. Better than before because it was the last!
Began observing again about 4:30 to 5:30, but
saw everything within 5 minutes of 5. First a
large, white bellied shearwater which flew with
stiff wings, not angled at the carpal. Too far off
to see well. Then saw a petrel, about 10" long,
black above (appar. uniform), long tailed (shape?)
white below and under the wings; couldn't see the
head well. Deep slow wing beats, more regular
and path a little more irregular than a Black Petrel.
Then a smaller, white rumped petrel, with a lower,
faster wingbeat than the Booby's, and less gliding.
Flight much smoother. Possibly an Oceanites. Too
dark to see the last birds clearly. The midshipmen
are getting ready for crossing the equator. At every

1964

(31)

17 Jan

on board "Golden Bear" en route to Galapagos. mess they must repeat the chant: "Sir! Please and pissy pollywoy (last name) who is lower than whale's feces, which is the lowest thing in the binary deep, dutifully request permission to sit and eat at your ~~royal~~ table." ~~that god-awful~~ ~~garbage~~ disposal unit (which usually manages to spit the garbage on one's arm) has been shut down and all the garbage is being put in a large can. Don't think I should have volunteered to be initialed when we cross the equator. In the P.M. saw Jack Murphy's film of the Galapagos but I suspect it showed only the best parts - this is what Billab and Carpenter indicate. About 5 saw a group of about 30-50 porpoise, white spot on the dorsal fin, white below with a diffuse dark line along the white area:




colors not sharply set off.

Rained about noon, then cleared up a little towards sunset.




18 Jan.

rough, warm during the night. high over east and over: showers during the A.M. sea remarkably calm. Visibility fairly good. Watched from 6:30-7:05 but saw only 1 dark phase "wedge-tails" which flew along the boat for 10⁺ minutes 6:30-6:40. a ? dark storm petrel also seen. Ate at 7 and got back from 7:15 to 8:00. Saw 7 white rumped storm petrels, 2 of which flew like the "Oceanites" of yesterday. About 8 saw 2 very close. They have a ~~deep~~ ^{shallow} slow wing-

1964

18 Jan. on board "Golden Bear" en route to Galapagos.
beat, and glide a lot. Rump patch wide; tail
appeared round & very broad when spread, forked
when closed. about 2:45 five Sooty Terns appeared,
and fished by diving high from the air over an
area where small fish were jumping from the
water. Very few flying fish. Saw one petrel
spiral some times fluttering over the water,
as if struggling to pull something from the
water. Most were alone, except the last 2; these
may have been C. costae. Watched again from
8:15 to 9:45. During this period saw about
15 white rumped petrels, 6-7 of the slow wing
beat type, mostly too far off, and apparently with
a broad, forked tail, and 3-4 of a smaller, faster-
wing beat type; one of these came quite close
and showed a divided white rump patch. Saw
a light phase wedge tail about 8:30 and a
light bellied Red footed Booby about 9. largest
group of petrels was 3 together, and most were
single. The largest concentrations about 8:15 to
9:10[±]. Rained about a quarter of ten. Everyone is
now circulating reprints, books, etc. for the rest of
the party to sign. About 10:30 someone said there
were turtles around and everyone ~~about~~^{went} forward saw
half a dozen or so. They were deep  and appeared
to have a weakly keeled shell (no sure is 1, 2, 3).
greenish-kaki in color. shielded. Henderson

18 Jan


on board "Colden Bear" en route to Galapagos.
says they are prob. Green Turtles, but deep enough for
Loggerheads. could see the beach. Saw about a
dozen white rumped storm petrels; there
seem to be two types but haven't seen them together
and confuse them a lot. One is the type I first called
Wilson's. It is larger, has a wingbeat intermediate
between booby and black, and glides a lot with
wings , very like a small Accipiter.
The rump patch is broad, clear, and bright
and the tail very wide  and notched when
closed. . The other is smaller with a faster
wingbeat, usually less gliding, and a narrower
tail, only a little instead of ~2x as wide as the body,
when fanned. ? more notched. Saw a divided rump
patch on one. It flies rather like a swallow. We
also saw 3 flocks of Sooty Terns, of 5-6, 13,
and 25 Birds. The flock of 12 had at least 2 birds
with the side of the neck marked
as such suggesting a collar.



Back same color, approx. as cap, but looks dark cap at.
? Buddled?. Nape not clearly light. Quit about noon for
lunch. From about 12:30 to 1:15 (rained). Saw three of
the smaller petrels, one close enough to see the divided
rump patch. Back up from 1:30 to 2 but didn't see
much. 1 or 2 more petrels. Getting sunburned. The
mids hip men are getting prepared for the crossing. All
the garbage which was collected was dumped overboard.



18 Jan

on board Golden Bear en route to Galapagos.
Last night, as some of the other preparations. After a short
meeting at 2 in which the latest confusion was explain-
ed, went out for about 2 more hours. not many
birds. Saw 2 Red-footed Boobies, and a nice adult
masked Booby. The Bill of the former is more
turquoise than the ones seen off Mexico; of the latter
was quite ~~pink~~ ^{salmon} pink. Saw one brown and white-
unidentified bird, 2 more white rumped petrels
and 2 single Sooty Terns. Also here were 2 more
turtles, 4 whales, 1 jumping completely out of
the water but very far out, and 2 near the boat
but hard to see. Ballanopterus? Earlier saw a
group of about 40 greyish colored porpoise.
Very few birds from 4:30 to sunset. Saw about
six types of flying fish today: a clear wing, no pelvic,
in large flock; a black winged, no pelvic, in flocks;
a black wings, large pelvic, white margined species,
a red-brown ~~pectoral~~ ^{pectoral} finned species (1 only) and a
spiral marked  ^{yellow} ^{blue} ^{black} ^{white} ^{yellow} ^{pale}. Saw only
one of these. The midshipmen are walking about
with 2 foot lengths of pine hose, slapping them viciously
against the boat. The "polliwags" (3rd class) now wear
jeans, a blue shirt, a tea shirt (on top), black tie,
(sticking out) and 1 tennis, 1 dress shoe. Two
barrels full of water have been tied to the prow,
one at each side, and in each stands a "polliwag"
keeping watch with "binoculars" made of empty

18 Jan




on board "Golden Bear" in W. Galapagos Arch.
Delaware Punch bottles, each polliwog stanchions
so. A # of 1st class men ~~on~~ ^{erising on} the equipment
near the bow. About 4:30 some third class men
~~threw~~ ^{threw} most of the hose sections over board, were caught
and had to cut new sections. Off Culepepper Is.
in the evening but unable to see it. ~~Cloudy~~ ^{Windy}, rainy,
but the sea not too bad. Very sunny from about 3
to 4:30. NOTE changed to central standard
time at 2 this P.M. Position at noon: 3°15'N,
93°54'W. got more positions from Pyle. (see tables).

19 Jan.

woke up in the A.M. about 6:30. We were
in sight of the W end of Isabella and could see
^{Roca} Redondo. Foggy (high), cool, very windy. Moved
along the W side of Isabella until the equator,
about 8 A.M. when we stopped for the Shellback
Initiation. Birds were abundant although
few in species all through the area. At the W end
of Isabella storm petrel were the most conspicuous
birds, and a few Puffinus l. subalaris were seen.
The Puffin, is very small, white below, and on the
median wing lining; face; tail
dark; back brown, mantle feathers
brownish in good sunlight, blackish
in overcast. bill dark. feet appear
dark. flight of 8-15 rapid (2-3/sec)
wingbeat, and a short glide; wings
sliff. Face pattern and flight very distinctive & unlike many.



19 Jan

on board "Golden Bear" in the Galapagos.
while the boat was ~~stopped~~ ^{stopped} for the initiation we saw many
storm petrels at close range, and I took pictures of
a few. + 1 or 2 pictures of Isabella (several before). At
least 3 types seem to be present, best distinguished
by the white tail band, and flight. One has
a wide band, forked tail and slow flight.
apparently castro as we have seen before.  white
black
feathers
above
Another has a forked tail, broad white band which
goes nearly to the ~~front~~ ^{root} of the tail, and on rapid
wing beat, glides little, and often flies quite high
above the water. The tail pattern is best seen
when the bird opens the tail; may have photo.  broad
white
feathers
terminal
black
Suspect this is O. leucops. The third is the same
size as above, perhaps with a lower faster wing beat,
and pattern over the water a lot. no white on
belly conspicuous, but white on tail only about 1/2
as wide as in the above. Tail square
and tail long, project behind. This may
be O. gracilis, and tried to get photo of it. 
Saw this with the "leucops". (Drawing not to scale. After
starting again saw 2 Swallow-tailed Gulls, adults.
flight like a larger gull, black narrower and wing lighter
than a Sabine's at 1st impression. Didn't see it long.
By the time we got to just N Cowley I. we had begun
to see great concentration of the Puffin and Northern
Phalaropes. Flocks of up to 100 Puffins and 1-2000
phalaropes were not infrequent, and they were con-

14 Jan

on board the "Golden Bear" in the Galapagos" steadily in sight. These # gradually dissipated, although occasional flocks could be seen all the way to the S end Santa Cruz. I would guess that I saw something like a half a million Phalaropes and about 1/10 as many of the Puffins. Almost until we got to Academy Bay, the only Boobies seen were adult Masked, these mostly singly spaced. Several came quite close to the boat and looked us over. - the bill is salmon pink. At Academy Bay saw half a dozen Blue-foots, 2 of which seemed to be somewhat imm. All the masked ad. We saw about half a dozen Frigate birds, all apparently magnificens & on the ~~way to~~ ^{along Isabel} and about as many at Academy Bay. Hard to see well. Saw 5 Sterna near Cowley I., all black above, white below, with the side of the neck white and all gave me the impression of being collared although I was unable to see them well. Brown Noddies were seen in small groups all along the course as the Puffins became common. They are uniform brown, with a grey ^{crown} ~~face~~ not sharply set off from the back color and often very hard to see. Flight very like an Elegant Tuna, although the shape & color of the bird is different. Saw one certain imm. Saw Brown Pelicans (2 or 3) in Academy Bay. #s for today are only very rough estimates! The initiation ceremony was delightful. We were ~~laid~~ ^{lying} upon the foredeck and selected members (not me) were paddled with the fire hose. Then we were

19 Jan


on board the "Golden Bear" in the Galapagos
dunked with water, shortly after the arrival of
Davey Jones, Neptunus ~~us~~ and his queen, and an
attended. After being sprayed, we were forced to
crow ~~along~~ a line of 60⁺ paddles, then had to crowd
before Neptunus - 1st dunked with an orange solution
of sour cream and salt, then we had to ~~lick~~ the
belly of one of the ~~at~~ negro cooks, then Neptunus' feet,
then his queen's breast. We were then given a pillate
of salty, ^{sour} cheesy paste and a ~~salt~~, sour cheese solution
and told to keep it in the mouth - impossible. Following
this was a run through the garbage chute - none
of this horrible concoction, and then we were
dunked in the botswain's chair. Delightful -
got a welcome shower. Took a couple of pictures
of this and then a few of Duncan Island (E side).
Very cloudy, especially over Santa Cruz. 1st impression
of the Islands.

Isabella - obviously volcanic. lava flows
very conspicuous on the 1st & 2nd coasts (not too far out),
very well set off by the greenish vegetation. Cactus very conspic-
uous in the lower lava fields. Surprising green considering
all the tales I've heard. Shore mostly of shallow lava
cliff, a few patches of mangrove and a few small coral
sand beaches. Heavy hakes on the beach. Very few signs
of bird nesting (guano) and when there seem no birds
in evidence. Looks interesting because of the vegetation,
rough because of the lava.



19 Jan.

on board "Golden Bear" in Academe Bay, Galapagos.

Harbough was to pen off to make much off, as was James: Crowley Is. is a bird rock. Duncan has almost entirely green ~~vegetation~~ ^{vegetation}, and at N + W is bounded by tall steep cliffs of ash. with much vegetation + little guano. Santa Cruz is a big flat  is lands, - with lava reef along most of the shore, obvious water, and a few sand beaches. The lower vegetation was browner than the higher and the upper parts were in mist. Not many birds along here as compared to along Isabella. Torcaga Bay has a long high dune beach; can't see the lagoon. Academy Bay shows only small patches of sand. Horse scattered along the shore, most conc. at the E side of the bay (Ecuadorians). but a few on the W (Europeans). Steep guano cliff at the W side of the bay. Black cliffs somewhat to the ~~East~~ ^{West} of the station too cloudy for pictures. [Began unloading a little today - confusion reign supreme?] On the whole - Isabella - steep - lava and green and brown plants - very rough. Duncan - ashy cliffs, green (lichens according to Dr. Bowman) - isolated - Santa Cruz, ^(vegetation) green, sloped, - habitable. All contrast greatly with the brownness of Gracelupe Is. In the evening the midshipmen were fishing off the rear of the ship by the light, catching a white + yellow grunt, a black + white puffer, and a ? (blueish green) (? jack). Saw volcanic smoke on the third peak from N on Albemarle.

20 Jan

Academy Bay, Santa Cruz Island, Galapagos
unloaded the ship today. am I tired (even though I
didn't do a damned thing!). We managed to get all
unpacking done out, except the jeep. cloudy in the
A.M. clear and hot in the P.M. Area around the
station very green concealing the rough lava below.
Yellow Warblers abundant and singing: chirp
sounds more metallic to me than mainland bird,
song note more musical. Sang pretty much all
day. Saw a few of the Mesomimus: they sound like
ash-thr. flycatchers. look and act a lot like main-
land noddies. Saw two or three Geospiza, mostly
fortis but some deliquiosa and a few scandens,
rather very easy to tell. All sound much a little
like Titmice: fairly tame. many banded. Along
the shore saw a few Ruddy Turnstones, a Tattler,
2 Whimbrels, a Skitt, a Green Heron, Brown Pelicans,
Frigatebirds, and Boobies (sp.). No frigatebirds and
little chance to observe. Tropidurus are abundant.
The males are more finely colored on the back, the
♀s very bright on the throat. lots of bobbing by both
sexes. A few Marine Iguanas seen the station,
a couple of good colored ♂s. Shore life very scarce -
almost no barnacles, and sponges - mostly on under-
surface of the body. Fish and shrimp common but
not abundant. lots of Halobates water studies. 2
species of Butterfly (a Phoebis and an orange? nymphalid,
) and grasshoppers & flies conspicuous. hot day biologically.

DeBenedictis
1961

(41)

Academy Bay, Santa Cruz Is., Galapagos.

NO NOTES FOR JAN 20-22 -

UNLOADING AND PACKING FOR
FUTURE FIELD(?) WORK.

Jan-20 - unloaded cargo from Bear. No
linenoleum. Saw Stilts flying by the station.

Jan 21 - unloaded + moved baggage in the A.M.

during the dedication of the station. In the afternoon
went up to the Seismograph station with Dr. Miller.

Saw Mockers, Geospiza scandens, fortis, palmeri,
Martins, Whimbrels, Black-bellied Plover flying over.

Steve Billeb. showed me Camachynus parvulus in
the A.M. near Nelson's, in in the P.M., where there
is a "magi" nest. Found nest of G. fortis.

Jan 22 - spent the A.M. near Nelson's looking at
birds. Found several Camachynus parvulus; most
have a "chip chip chip" song with the cadence (but with
acc) of the Wilson Warbler. Saw a ♂ plus a black ♂ Geospiza
magirostris and found the nest of the pair. Just poked around
the station a little in the afternoon. Entomologists very
busy collecting bugs in the evening. Besides species mentioned
above, have seen locally:

O. gracilis, Puffinus l. subalaris, Magnificent Frigatebird, Brown
Pelican; Blue-footed + Masked Booby; Green Heron; Sooty Gull; Brown
Noddy; Wandering Tattler; Ruddy Turnstone; Semipalmated Plover;
Tropidurus; Marine Iguana.

1967

(42)

23, Sun

Academy Bay, Santa Cruz Is., Galapagos.
 left the Darwin Station this A.M. about 5:30 with Robert Pyle to see what the old trail to the highlands looked like. Fairly light, but cloudy, by noon had cleared off. lots of song; along the trail to the other side of the town. saw ~~many~~ Geospiza fortis, feliziosa, and scandens. A pair of heliginosa copulating. Songs are very confusing: tried here to spend some time just working them out and watching finches around the station now that I have seen most of the local species. A few C. parvula around; didn't see the magnirostris. The trail to the highlands starts out in heavy, dry, scrubby vegetation which seems to be just starting to bud. Trail rough but possible; rocky; dry. Tropidurus very common along the lower part. farther out to the beach the under vegetation gives out. about this point the first Certhidea turned up. a small almost olivaceous, yellowish-brown; heard a little chatter. Gled him. very active. 2-3 songs, one "chee chup chup" and buzz weeeeee sup; all calls very high pitched compared to the other species. Very easy and diff. near the middle of the dry zone found a pair of Myiarchus. Looks and sounds like a small cinnescens. pair feeding quite a bit. ? nest in a dead trunk. Geospiza much commoner along here than at the station; many fewer Dendroica. Saw a nice yellow billed Cactospiza feeding on a dead tree flaking bark with the bill tip

P. DeBenedictis
1964

(43)

23 Jan.

Academy Bay, Santa Cruz Is., Galapagos.
2-3 inches from the ground. There a call, repeated,
with a vine like structure and chased a Cactospiza
from the vicinity. Found 1 ♂ Platyspiza singing
in an acacia. Song a awee eweeeee chă,
low pitched, rough. Bird clumsy but not feeding.
At the barracha found a Vermilion Flycatcher,
about 300 yds further along the path saw another
dark male (orange belly) give flight display, very
simple compared to (chif. brues). The bird dip
up and down, slow wing beats, 1 dip / $\frac{3}{4}$ sec.,
making a snap noise at the top of each arc and
calling chă wi during the arc as such:
chă wi (snap) chă wi (snap) chă wi (snap)



path roughly circular, didn't land at starting
position. Saw one nice ♂ G. magnirostris, all
black, here. Song very deep and "nasal", rough.
near the top of the dry area, a flock of geospiza
flushed leaving a baby cuckoo, which I captured.
Found another in a tree c. 25' away. This bird couldn't
fly, gave a rough call when handled. Bird in the
tree gave a double, hollow "~~coo coo~~" very deep, at
intervals and was able to scramble through the bush, fly
2-3 feet. Saw Camarhynchus parvulus gathering
nest material, a hanging lichen, for nests which
were way up in trees and made of the lichen.
very little display when gathering. Ceithidea has



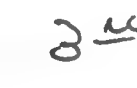
1964

23 Jan

Academy Bay, Santa Cruz Is., Galapagos.
 a wing out + fluttered, tail up display like the
 others. Very common as one goes higher. Saw 2 or 3
 yellow warbler nests; warblers to be high as I went
 (c. 2-3 miles from the Horneman farm area.
 Where we turned around it was very bush, with
 flowers and berries; Geospiza feeding on ^{seeds} and
 on low berries on the ground, often in flocks of 20-50.
 Took 2 pictures of Olyraea and 3-4 landscape
 from mid transition zone to mid dry zone.
 on the way down. camera says on shot #34
 now. Much geospizine nest building. Nests easy
 to find. Insects very common in upper zone.
 Saw Phaethon, a blue (Chrysaerid), a Viguiera sp.,
 and 2 skippers, one ? Urbanus galapagoensis.
G. scandens was very scarce near where we
 turned back, as was Tropidurus. Saw a Phyllodactylus
 in a dead log which Bob Pyle picked up at c. 150'.
 Got back about noon. Saw a hans fuliginosa at the
 beach. Spent the rest of the ~~afternoon~~ ^{afternoon} packing for the
 pt. Espinosa trip. about 5:30 saw about 8 whistlers,
 a Black-bellied Plover and a large shorebird flew over.
 Hot. The marine biologists have been collecting like
 mad. Several large sp. of brittle stars and 3+ sea
 urchins, the with long sharp spines ~~_____~~.
 In the evening Antonovitch began collecting. took
 a large green springed moth, lots of flies and
 beetles. Went to bed about 10.

1964

21 Jan.

Academy Bay, Santa Cruz Is., Galapagos
 spent the A.M. getting some idea of the equipment
 needed for the Isabela-Fernandina Trip. Skinned
 the cuckoo and one of the hatterias. Saw an ad.
Coccyzus in a open bush between the housing
 units and Snow's house. Afternoon spent parking.
 about noon went to Devine's. Saw long call of
Larus fuliginosa. Starts with a rough call in head
 up , wings open, followed by a series of "hñah"
 notes from a low oblique . A birds together
 gave this  3rd flew over, all adults in
 good plumage. 1st call series of about 15-20 "hñah"
 calls, the other (2-3 series) of 8-10 followed call
 by bill-ups with head retracted (head tossing).
 Also saw a Semipalmated Plover and 4 Ruddy
Turnstones at Pelican Bay. Dr. Bowman showed
 me a Camachyus parvulus nest in a Opuntia
 in the afternoon about 4:30 went to Devine's
 store. Saw a Green Heron, 4 Whimbrels, 6
Larus fuliginosa, and a Blue-footed Booby from
 the store in 1 1/2 hours. Rained fairly heavily
 in the late P.M. and at night. A heavy fight of
 ants and moths at the windows. We leave at
 about 7: A.M. tomorrow for Pt. Espinosa and
 an Ecuadorian Cueller. The party at Espinosa
 is to consist of: Dr. ^{Devine} Amador, Bartholomew, Carpenter,
^{A.M.} Kuschel, Miller, Walker, plus seven grad and undergrad.
 students, plus 1 or 2 along for the ride. Will probably g.p.

1967

(46)

24 Jan Academy Bay to Nanborough Is, Galapagos
up after we got there. A very cloudy day, and not
much done as usual. The other rail died today
and proved to be a ♀ in breeding condition.

25 Jan. rained heavily off and on during the night,
and continued on into the A.M. about 6. Got up
about 8 and slogged over to Devine's Store to
board the Ecuadorian Patrol boat bound for Pt.
Zapirana. Had mild dysentery, and slept much
of the trip over. Cleaned up quite a bit in the
daylight and got fairly sunburned. Saw a Wedge
Albatross on the water c. 1 mi. out of Academy
Bay. Petrels and Puffinus present in small
#s. Most of the Petrels, c. 55% were O. tetrazzini,
about 40% were O. pacificus and the rest
castro. This an average for the trip. Most
of the petrels were along the S. shore of Isabella.
Only saw small flocks of Puffinus + Northrup
Phalaropes near the SW end of Santa Cruz. Saw
three Frigatebirds (Red-bill) near the SE point of
Isabella. Only scattered Puffinus and phalaropes.
here. Near the radio ~~station~~ ^{tower} at the SW end of Isabella
went by a large Blue footed Booby colony; birds diving
on the water. Brown Pelicans, Masked Boobies, Frigate-
birds common here and saw a large flight belted
Puffinus (? creatus), 3x as large as the Hedyme's shear
waters. The three petrels seem to be sorting out fairly
well. O. castro has long primaries and a stocky

25 Jan

Santa Cruz to Fernandina Is., Galapagos.
wingbeat, faster than Black Petrel. Colicla a lot with
down pointed wings. Tail with a wide white + mod.
dark band.

O. castro



O. tetleyi
~~castro~~ is shorter winged with a more rapid, jerky
wingbeat; looks white tailed with a black tip.



Seldom see castro on the water; tetleyi frequent
plops down on the water, picks something up &
flegs off. *O. gracilis* has a longer tail, shorter,
more rounded wings, long feet, flies like a Cliff
Swallow,



it often walks along the water
fluttering slowly, for 3-5
seconds at a time. Colicla
with the wings held

more out right. saw one stand up on the legs
in the water with the wings closed. The Puffin
have pink legs. Except for storm petrels, which
we saw until we got within Pt. Mangle
and Pt. Espinosa. when large #s of Puffins,
Blue-footed Boobies, Frigate birds, and some Northern
Phalaropes were seen. *O. gracilis* the commonest
petrel by far in this area. Isabela is very
lush and green on the S end, drier and more
open on the west side. Fernandina is largely
lava covered except for a few patches of ash
vegetation on the higher parts and mangrove at the

25 Jan

Santa Cruz to Fernandina, Galapagos
two points. Most of the island has rocky shore.
little beach except at the two points. Saw 3
Swallow tailed Gulls. 8 of Isabellae - look like
large Sabins, with slower flight, and
white in the wing tips: . 5 tuna
boats in the channel between Fernandina
and Isabellae. 4 fled when the albatross
approached, 1 sailed past. 2 of the boats had
large groups of sea lions following them.
Saw a Parasitic Jaeger, dark or intermediate
phase with tail, much white on the wings,
and another, prob the same sp., without tail
in this area + a (? 1st winter) Franklin's Gull,
white with dark mantle + markings on crown,
white on most of the primaries; no black tips
obvious. Saw it only briefly.  + another
gull (looked like yg. Calif. Henning type).
Later saw ~~two~~ ^{two} hooded gulls which appeared
white bodied; couldn't see the mantle pattern.
The lava at Pt. Espinosa looks like dried cow
pat; lots of snail on it. Marine Iguanas common
and saw 1 Tropidurus, much larger than on
Santa Cruz. Sea lions abundant, even far out.
One heard in the channel was leaping out of the
water like porpoise. Blue-footed Boobies &
Brown Pelicans two commonest birds at
Pt. Espinosa. but a # of Frigate birds about.

25 Jan

Pl. Espinosa, Fernandina Island, Galapagos.
mostly magnificent. Maybe a few minors.
but not sure if they are in pre-adult molt.
Many of the O. quarels show heavy molt on the
wings and tail and I was able to see the belly
patch of many. Feet all black. No sign of
the water birds at Espinosa were 3 Penguins on
the rocks. Later saw half a dozen more scattered
about. Saw a flightless cormorant swimming &
fishing, leaps out of the water before diving &
really large compared to N. American species.
A ^{Butcher} Hawk was perched in a dead tree on
the point. Mottled on the back & very pointed
at the ~~end~~ end like B. swainsoni. Yellow
Warblers common in the dense mangroves
here and heard 1 or 2 grosbeaks. Saw
a Turnstone and 2 Whimbrels before
sunset. Dinner was a ^{4 can} delightful concoction
of ^{2 can} Ministone, ^{1 can} hot dogs, ^{1 can} ~~potato~~ red kidney
beans, mixed vegetables; after full day of
eating nothing it was good (on the boat
they gave us dry tuna fish sandwiches, and
my container was so mouldy I couldn't bear to
drink the H₂O. Very windy, and sea lions
are already coming in to investigate the
camp. One attacked (in a loose sense of the
word) Rodger Peterson & Charles Carpenter
chased it away. Looks like a wild camp.

26 Jan.

Pt. Espinosa, Fernandina Island, Galapagos.
woke up shortly before sunrise. scattered clouds and
a fairly strong wind. Didn't rain and no insects.
Had a warm, full breakfast - fast. Amos very sunburned.
4 young Larus fuliginosa flew over the camp. The
same marked Buteo showed up in the trees on the
pt. and allowed everyone to come quite close. The
tent blew over last night; got a picture of our camp
in this condition. Spent the A.M. walking about the
point and towards a point to the north. saw about
20 Nannopterum harrisi, 9 at the pt. 6 at another
corner, the rest scattered and in the surf. about half
are banded. A very large, heavy legged bird, with
small moth eaten legs. Considerable size and color
variation, from large dark (and light) birds to birds
1/6 the size. 5 Penguins working in the surf of the Pt.
were the only ones seen. 1 Oystercatcher on the pt.
lots of Puffinus working along the Pt. in the d.M. less
conspicuous than, as were Noddies. Blue footed
Boobies and Magnificent Frigate birds fairly conspicuous.
Green Herons are scattered along the shore in the mangroves.
Some have orange legs, saw one with red legs. Some
show more light on the breast than others. 3 Whimbrels,
about 10 Ruddy Turnstones, 20 Wandering Tattlers, and a
Semipalmated Plover in the rocks: The Tattlers follow
the ~~rocks~~ ^{mangroves} way back from the shore, and are
very vocal; Bob like Spotted Sandpipers. Turnstones
all work the rocky areas. Marine Iguana are

P. DeBenedictis
1964

(51)

26 Jan

Pt. Espinosa, Fernandina Island, Galapagos.
quite numerous along the beach and many males
are bobbing. Tropidurus common, mostly in edicosis.
It is about 25% larger than the Santa Cruz form, darker;
♂s are deeper red and show bars on the face. Saw
one small striped Dromicus about 10, escaped in
the lava. Lava here is of two types. One has the
appearance of dried ~~lava~~ ^{cori glass}, and is solid and easy to
walk on. The other is soft, glassy sounding, crumbles and
is very difficult to cross. Tears up one's shoes and
trousers rapidly. Finches are very scattered and shy;
most seem to be G. fuliginosa. Saw one feeding
on the tail, legs, and along the crest of an Ambly
rhynchus.? taking ticks or perhaps shed scales and
salt thereon. The mockers here are much smaller
than on Santa Cruz, esp. at the bill, and ~~brown~~ ^{show has}
white on the wings and nape. Saw wing flashing
in one foraging on the ground under a mangrove
repeatedly: didn't seem to be catching much. Went
up to the Hawk's nest, a large pile of sticks on the
ground. When Dr. Miller climbed up to it, ~~one~~ of
the birds attacked him, striking him on the hat, softly.
The same bird made several passes, while the other
bird soared overhead. Both cawed, a short descending
"ngakhhh", high pitched and Reminiscent of B. lineatus but
softer, and a series of shorter mono-pitched "ngah" notes.
Later saw the two birds on ~~a~~ ^{top of a deadish} mangrove, one
bird in the mounted position. One egg in the nest, greenish

26 Jan

Pt. Esperanza, Fernandina Is., Galapagos.
and unmarked, there are at least 3 Buteo here, a mottled
juv., a dark phase ad. (which attracted Dr. Miller) and
a grey ad. (the mate of the above). Flight shape is very
stocky, long square wings and a long whitish tail
giving it an almost eagle like
appearance. See and feet and
legs very yellow. Took a picture of one sitting in a tree at
a great distance, plus a picture of a cormorant group
very far off to finish the first roll. Yellow warblers are
fairly common in the mangroves although not as much
as at The Darwin Station at Santa Cruz. Large
grasshoppers very common on the lava. Several large
channels extend far into the lava and seals go as
far in as the water, as do scattered Iguanas.
Several large isolated pools have fish, some
8-12" long. A dragonfly, Tamela sp., is very
common here and prob. breeds in brackish water if it
breeds locally. Miguel Costo showed me an inactive
nest he said was a Night Heron. The nest was a
circular pile of sticks placed in a pothole (under a ledge)
in an open lava field. The site was much cooler
than the surrounding lava during the day. Came in
about noon for lunch and slept until about 1:30 as
did almost everyone else. In the afternoon set up a
cover to watch the cormorants at the pt. and spent
about an hour from 3-4 watching them. Noddies
and Blue footed Boobies flying by the pt. Saw the

Jan 26

Pt. Esperanza, Fernandina Island, Galapagos.
bird which looked like a Calif gull again. It is
laid, but don't know what. ? young Tanager. Rained
fairly heavily from about 3:30 to nearly 5, then
cleared up gradually during the night. (Hopefully).
Lots of ants coming to the latrines at night. Boyd
Walker speared some groupers for dinner (delicious)
and 3 ad. Sooty Gulls came for the remains as
well as a Green Heron and dozens of Red hand
Crabs. Most of the afternoon everyone crowded under
the tarp set up for the kitchen area and chatted
out of the rain. About 15 Ruddy Turnstones, 2-3
Tattlers, and a Semipal. Plover about + 1-2 Whim-
puls and an Oystercatcher. Seals all over the
place, pups from about 3' to 5' long, with smooth
hair, + numerous ♀s and ♂s gathering, harrassed.
Barking all day long. At mid day every bush and
pool of water has seals in it. Saw a few Penguin
on the rocks S of the Pt. and many Pelicans
feeding here. They dive shallowly into water only
about a foot deep. Saw one Oceanites gracilis from
the Pt. about 3:30. Wind died down considerably
in the P.M. for a while in the afternoon it was so windy
the Dr. Miller's tarp gave him and me much
trouble whipping up and down in the wind. Very few
finches about; most seem to be Geospiza fuliginosa
in non breeding condition. Besides the mangrove,
the only other plant is a sparse Cereus cactus up to c.

26 Jan.

Pt. Espinosa, Fernandina Island, Galapagos.
20 inches high, yellow-brown in color, with short dense spines. The lava areas extend inland for several miles, but there seems to be much mangrove along the shore in this area. More vegetation on Isabella across the channel than on Fernandina. At the heat of the day all the lizards run about on tip toe. Saw finches feeding on the ground near iguanas but not on them. Seal scats are fairly numerous on the ~~surface~~ ^{surface}; Iguana droppings on the rocks: their droppings are a large soft greenish mass which flows freely when excreted and forms a pasty mass when dried. Tide pools contain mostly snails and small fish (goby & blenny type); a few barnacles in some. Haven't done any rock turning. Crickets calling at night, but little in sight otherwise apparent except for the large grasshopper and the dragonflies. The box of oat meal Dr. Miller sent over in my duffle bag broke open and I set up the 1st feeding station (I suspect) on Fernandina - nothing had come to it by about 8:30. Dr. Bartholomew is working with Ross Kiestler on thermal characteristics of Amblyrhynchus. Dr. Walker and Hobson are deciding where to poison fish. Dr. Carpenter is observing lizards. Rodney T. Peterson is photographing everything in sight and Dr. Dean Amadon has been watching the hawks. I don't seem to be doing much at all now besides assisting

26 Jan

Punta Espinosa, Fernandina Island, Galapagos.
De miller with the cormorants. Probably the most striking feature of the birds is the scarcity and shyness of land birds. Water birds abundant and conspicuous. Species seen to date: Audubon Shearwater, O. gracilis, Flightless Cormorant, Penguin, Blue-footed and Masked (this very rare) Booby, Magnificent Frigatebird, Brown Pelican, Brown Noddy, Green Heron, Semipal. Plover, Ruddy Turnstone, Wandering Tattler, Whimbrel, Oystercatcher, N. Phalarope, Sooty Gull, Gull sp., Yellow Warbler, Buteo, Mockingbird, Geospiza fuliginosa; Tropidurus, Amblestynchus, Dromicus, sea lions.

27 Jan

woke up just before dawn. everyone getting up very slowly. Yellow Warblers singing, sea lions barking and producing other sick-sounding vocalizations. A pair of doves showed up in camp and feed for a while at the edge of the mangroves. wouldn't eat the oatmeal I left out last night. Nothing else took it either. Feed more. Variable clouds, clearing up in the A.M. Saw a few Geospiza and 1-2 mockers. Water birds much as yesterday. After breakfast went down to wash my utensils; an octopus came out of its burrow to attack the small fish attracted to food scraps, but it didn't catch any. 4⁺ types of fish are obvious in the pools, one a pretty deep blue one with a red back. Watched cormorants from 7:20 to nine. lots of Puffinus + Sula nebouxi flying past the point + a few petrels and noddies. A semipal. Plover and a pair of

DeBenedictis
1964

(57)

27 Jan

Punta Espinosa, Fernandina Island, Galapagos
oyster catchers at the point. The usual tattlers and
Ruddy Turnstones and occ. Green Herons. After the
watch came back to write up the A.M.'s notes. Went
out to watch again from 11. to 12:30. After lunch
slept. very sunny. Saw another dove fly thru the
camp area. I am beginning to feel feverish and find it
hard to concentrate. At the 2nd watch many fewbird
going past the point, just scattered small groups. After
this slept until about 2, then went out again for c. 1 1/2 hours.
Still feel crummy. About 3 P.M. a large group of Puffinus
and Anous began to pass the point feeding in a large
circular flock. The Puffinus flying to the surface and
landing, the Anous dipping like a Bonaparte's Gull.
Shortly after a ~~school~~ of large porpoise (all dark) went by, with
a flock of Blue-footed Boobies feeding over them. Also saw
an odd gull. white below and on the rump and tail. Black
Tip to tail. Brown mantle and head. wing coverts and
tips of secondaries darker. Outer
primaries dark brown. Bill large,
seemed to be pale with a dark tip but not
sure. Size, large, felt heavy. looked
like a very large Ring-billed gull in 1st year
plumage. Prob. the same as the imm.
gull (unidentified) as I saw on the
Patrol boat when we came in. ? young
Fork-tailed gull. if so it is very unlike the equivalent plumage
in Sabine's gull. Felt pretty bad in the evening and slept



27 Jan Pt. Espinosa, ~~Galapagos~~ ^{Fernandina} Island, Galapagos
a lot after the sun went down. Bird movements not frequent
but very soft.

28 Jan Don't feel as sore this A.M. but stomach upset.
Will stay in bed most of the day. Stomach gassy,
like the flu. Don't eat much. Not much happening
here. Dr. Miller feels the cornucopia watch is done -
~~and~~ ^{and} I wouldn't have been any help anyway.
Only yellow Warblers singing, and this in the am. A lot
of them and the finches go way out on the lava to feed.
Saw Finches on the iguana again yesterday, and almost
everyone else has also. Miller, Carpenter, and Ortiz (an
Ecuadorian Student) have captured Dromicurus. About
noon a hawk came into camp and landed on the ~~roost~~ ^{mangrove}.
Saw a dove. Large #s of Frigatebirds (all one size, I
thought). were circling over the pool Walker poisoned
2 days ago, with 2-3 Brown Pelicans. Camp area is on
a sandy (coarse sand) beach on a lava point at the NE
corner of Fernandina. The lava near the camp is black,
ropy, and easy to traverse. Much broken up by tubes
and many pools (all tidal) extend to at least 1/4 mile
inland and many of these have mangroves around them.
Sealions move into these at high tide, and most contain
fish, red land crabs, and Marine Iguanas. Cormorants are
dispersed along the coast as are green herons, but periwinkles
are conc. mostly south of the point in more rocky areas.
There is a Frigatebird roost in the mangroves here, but no booby
or shearwater concentrations on shore. Large #s pass off shore

28 Jan.

Pt. Espinosa, Fernandina Island, Galapagos
most of the boobies are Blue-foot (c. 99%). Marine Iguanas are thick, go out to feed at low tide and come on the high rocks at high tide. Most in ^{edicosis} ~~edicosis~~. Tropidurus is fairly common on the lava, ♂s larger and darker than on Santa Cruz, and also mostly in ^{edicosis} ~~edicosis~~. ♀s much smaller than the ♂s. Have not seen any geckos, but have seen 4-6 "Tropidurus. Several large flies and a large Odonata (? Tametrus) are common but no mosquitos. Spiders fairly numerous. Very little song except Yellow warbler and white notes from the mockers. Tattlers and Turnstone make as much noise. In the evening 2 Sooty Gulls come over the camp as we were eating but then went on. Am reading The great Prince Shan by E. Phillips Oppenheim to pass the time away. (a bomb - Jan. 30) Got very tired whenever I get up for more than 1/2 an hour or so. Clear and sunny in the A.M., then clouded up with fairly strong wind in the P.M. Yesterday at noon, Dr. Amador had a huge Nikon lens that none could figure out how to use. Today Dr. Miller located a Cormorant nest with a 7/8 grown ^{young} ~~grown~~ went to bed ~~young~~ early again.


29 Jan.

woke up about 6 A.M. overcast and windy, looks like it may stay that way today. Not much to do; feel a little better but still weak today. Still soft, somewhat upset in the gut. Ate better than before. Tried to tramp about a little but got tired quickly. Saw a Sooty gull feeding on the rocks at low tide. Taking some sort of invertebrate apparently. At least 2 Geospizas singing and several Black fuliginosa appeared in camp.



28 Jan

Pl. Espinosa, Fernandina Island, Galapagos.

Kiesler caught a Diomedea[↑] with an empty stomach. Amador's hawks have apparently deserted and he is having much trouble with his study. Dr. Usinger is industriously beating the mangroves and Dr. Miller is winding up on the cormorants. Lots more finches about than usual, saw about 10 in camp area in 20' on the low ~~lake~~^{tidal} area N of the camp. Most seem to be fuliginosa. Saw a dark tinged sandpiper with dark legs, white side to the tail, size of a turtle. Probably a Solitary Sandpiper but didn't get a good enough look at it to be certain. It was on the shore but flew back into the mangroves when disturbed. Green Herons very tame here. Saw 2 finches feeding in the crevices in the lava, much like rock wrens. One was fuliginosa, the other had a longer beak but same size and markings. → maybe just a long beaked fuliginosa. Since most of the other things I have planned have failed, I will try to do some collecting now. Not much doing in the afternoon. Everyone planning to go to Tagus Cove on Isabella. Beginning to feel bad again. About 4 had severe chills, shivering inside my sleeping bag when everyone else was warm, then a fever. Took some ~~the~~ salt and aspirin. hope it works. Saw finches working on the iguana just outside the tent. Didn't eat dinner. Dr. Miller caught 2 mice this evening and put them up. Dave Pearson moved into the tent (where I have been staying since sick) and things are really crowded now. About 9 there was a sudden short shower. Peterson panicked and moved into the tent for the night as well must have been really uncomfortable. Didn't get to sleep until ~ midnight.

30 Jan Pt. Espinosa. Fernandina Island, Galapagos.
feel much better - hopefully. woke up as the same way.
a cloudy, windy day. Miller got 3 more mice which
I put up as skins and (2) pt. and (1) complete skeletons.
Everyone but Boyd Walker and Ted Hobson left for Tagua
Cone about 7: it is a great relief to do something beside
~~like~~ around uselessly, even if my skins are cummy. About
8:30 as I ~~was~~ ^{was} de-meating the ♂'s skeleton 2 imm.
hooded gulls came in and landed on the other side of
the camp. I went over and saw both with and ad. fuliginosus.
They are smaller (1-2"), have white underparts, brown hooded
aspect and slight brown breast. Mantle as the bird described
27 Jan; secondaries + in 3-4 primaries white tipped. Bill
black. Tail with black band (narrow) to outer feather. Same
as the 27th birds and suspect they are 1st year laughing Gulls.
Didn't see much else until about 1:30 when done with
everything. It is quite a job to save a mouse skin + comp.
skel! good thing I have lots of time. About then noted a
large group of Frigatebirds off the mangrove S of the tent;
saw several chases, one ♂+♀, one 3♀s, in which the birds
flew, one over the other, flapping slowly (not unusually so)
and jabbing at each other. The ♂ did not inflate his gular sac.
~~altho~~ altho it was conspicuous, and the ♀ tended to stay above. This
pair did this for 2-3 minutes, moving 100 yards of the main
flock, in an erratic, spiralling, () flight. The
3♀s stayed together for only 1/2-1 minute. They and Pelicans, and
Boobies and O. gracilis are after fish walker poisoned. Also
3 gulls, the two described above (presumably) and an adult Franklin's

30 Jan.

Pt. Espinosa. Fernandina ^{-tip} Island, Galapagos
mottling into nupt. cap. The wing pattern =  is very distinct.
I saw ~~one~~ of the imm. gulls on the water c. 1 foot from the
Franklin's; it ~~is~~ about $1\frac{1}{2}'' \pm \frac{1}{2}''$ larger with a longer bill. The
size difference, so obvious, convinces me it is a Laughing.
Saw all 3 gulls together but not as close several times.
The Franklin's has a hood on top of the head only  and a
blackish colored bill like the bird I saw 2 years ~~ago~~ in Calif. Saw
a couple of imm. L. fuliginosa around the camp about $\frac{1}{2}$
an hour later. They are much more uniform on the throat
and are black except for the tail coverts on the body. The hawks
are still messing around the mangroves and making lots of
noise. Yesterday Dr. Miller told me a Night Heron nest ~~active~~
had been found and will try to see it soon. O. gracilis (3)
are feeding ~~so~~ close to shore I could kill them with a shot
pistol (if I had one). Very windy and rained a little about
2:30. One of the mockers has been coming into the cook area
for food, and is pretty cocky. Turnstones run about on the
sand like plovers at high tide. The call of Ruddy is much more
melodious than that of Black. Seals still making a grunting
sound like a constipated soul with diarrhea! This is mostly
from young seals. About 4:30 Miguel Castro's boat, almost overloaded with
our party came in. People were hanging in all directions. The two laughing
Gulls, which had been around all day, disappear. A large group of Noddies
75+ were feeding off the Pt. when they came in, circling, taking food
by dipping to the surface and picking off food. The shearwaters land
on the water and ? dive. A few Oenitae in the flock. a little later
a great flock of Boobies feeding and resting on the H₂O N of the Pt.

1964

(63)

30 Jan Pt. Espinosa, Fernandina Island, Galapagos.


All the returning party was beat. Miller got a ~~penguin~~ (pickup) and several passerines, Singer lots of bugs. Carpenter & Kiestle each got a Phyllodactylus. Spent the evening in a discussion of the pros and cons of Tagus and the role of scientists in politics (mit). Lots of bugs, including a plain brown tiger beetle, came to the camp. Feel very good and have a good appetite.

31 Jan. beautiful A.M. Frigatebirds soaring over the lagoon just W. of camp. Decided to finally get a few pictures and tramp around and see the rest of the point area. During breakfast the Franklin's gull showed up for a little while started out to the cement coast & got 3 pictures and a couple of the Iguana rock covered with lizards. Not much else around. No Boobies today. Worked then to the N of camp along the shore. Saw 1 or 2 Semipal Plover and several Turnstones and Tattlers. An Oystercatcher was feeding in a rock crevice and I saw it take a large (6" in.) polychaet worm from the crevice. It would only allow a 20" ft. approach. and was silent. Not many seals here. So worked back towards the camp, capturing a large ♂ Tropidurus^{of}, which I got 2 pictures. It was dark above and very orange below when captured, and 1st developed white-cream spots on all the dorsal scales, then lost these and developed a dark throat. It is about as bright as any ♂s here. Bob pattern is as Carpenter described, normally ~~~~~ but sometimes ~~~~~ or so. # of bob series about 1 to 3, usu. 3. Feet actively on very small prey. Fz are only about half + size. bob. in same way.


P. Benedict's
1964

(64)






31 Jan

Punta Espinosa, Fernandina Island, Galapagos.
Saw a small (15-18") brown, striped Dromicus in the lava
about 9: but it escaped down a crevice. Went back to camp
dropped off the lizard and out around the lagoon S of the
camp. One Sooty gull flew over but didn't stay.
There are at least 3 adults and 1 imm bird around.
Lots of pelicans and Frigatebirds near the lagoon.
Marine Iguanas very shy and run when approached.
got pictures of a bright bird and of a G. fuliginosa peering
intently into the spines of an Iguana after it had been probing
in the axilla and groin area of 1 or 2 animals. After working
along the lagoon for a while (saw Penguins and Cormorants) feeding
off the reef). worked out in the lava. The appearance is of
scattered pools, many with fish, with mangroves around
them, surrounded by lava. The lava is bare for the most
part. Tropidurus near the mangroves. The Cereus
grows ~~scattered~~ at fair distances from the mangroves, in the
open, in clumps 9-12" high, in cracks in the lava. ~~Red~~
~~brond?~~ grass grows more or less solitarily in the
crevices and also a flaccid which flowers in the A.M.,
only 1 to 3 flowers / plant. The leaf is c 1" long, needle like.
It grows always alone, while the grass grows with the cactus.
A few grasshoppers and find occ. caches of chalks boxes of
very small birds, very not complete enough for identifying use.
Watch monkeys (a little disturbed) in the mangroves. The
are about on the ground and probe sporadically, somewhat
like a robin, in the litter. Flash "the wings sometimes, c. 1/4
open and dropped nearly to the ground. 


31 Jan

Punta Espinosa, Fernandina Island, Galapagos
tail cocked, but not flushed much. White tip conspicuous
in flight. They come readily & silently to squeaking. Most
activity in the open (& vocal) in A.M. and in P.M. Got into
camp again about 11. Dr. Miller was coughing out a
Penguin and several Brown Pelicans, Frigatebirds,
and a few Ocenites and a L. fuliginosa had come in
2 Penguins and a Cormorant feeding off the reef. Dr.
Miller shot 1 Petrel and a Oystercatcher off the Pt. Got a
picture of this. Consider it most remarkable. One of the
Ocenite came very close in and I could see the foot action
the leg is dropped down and back a c. 45° and the foot
is move back and put about $2\frac{x}{sec.}$, for $\frac{1}{2}$ to 1 sec. Saw one pick
up a small scrap of meat from the penguin. Most of the time they
don't seem to catch much. One one was pattering, then plopped
beely into the H_2O , then flew off. didn't see what it got.
All the birds are in very heavy molt, the one I skinned is molt
on all the body tracks. 1-4 primary + appas. the tail feathers molting
in, rest old. Skull  apparently along ~~from~~ ^{stern} lines of the skull.
Stomach full of a white fluid, a pink gook, and black spots. This appears
to be eggs and body of a minute soft bodied shrimp, with few appendages.
Although Alalobates was common in one of the lagoon over which they
were feeding, no remains were in any of the stomachs. After lunch
Skinned one of the Petrels and then went out on the lava with Dave
Reichman. finally clouded up and a nice breeze came in. The tide
is high now, but now the same area I visited in the A.M. looks
like a lake with peninsulas of lava jutting in the water. The tropidops
have been forced out of the lake beds and are up on the rocks.

Si. San.

Punta Espinosa, Fernandina Island, Galapagos.
Mostly small animals and no fighting. Far out in the lava
saw a dragonfly feeding on gnats flying over the fissure. Which
appeared dry. Found several scattered groups of bird bone and
two small, Orizomys jaws with one tooth  in it. These piles
as far in as we went (c. 1/4 - 1/2 mile from camp). A white steam
seems to be sulfur dripping from the lava. Bone piles do not look
like recent pellets but rather ~~aggregations~~ ^{aggregations} of bones. Saw a grasshopper
c. 100 yards from nearest mangrove and Trop. c. 50 yards
out. Found a crater with a short upright plant growing in
salt (not very to my taste) puddles  and algae. A faint green
lichen on some of the cinder cone rocks. The gnats are fairly
widespread and where they occur spiders have built webs
for them the spider is a small black species with 4 yellow
dots on the abdomen . Walked back in along the mangrove
Squeaked up lots of ~~workers~~ ^{Dendroica} petelchea and 1 worker. It feed
in the rocks and leaf litter under a mangrove, where they usually
do feed, probing into the spaces between rocks rather like a
wren. No wing flashing and lots of tail cocking. Stands very
high on the legs. Saw 2 yellow warblers come in from far
out on the lava. (25+ yards at least). Also saw one with
a white fluffy nest material of unknown origin. A white
clown-like left eye. seen floating in the algae . No obvious
seed. A ~~small school~~ ^{school of young fish} of fish in one of the pools (alongside,
blackish with a yellowish long stripe , silvery below, would
jump out in unison. Got back in camp about in time for dinner.
At this time Dr. Bartholomew showed us a Orizomys nest.
located ~~in~~ ^{between} 2 nearly vertical lava sheets c. 2" thick, about


31 Jan.

Punta Espinosa, Fernandina Island, Galapagos.
19" down, under a overhanging rock, . The nest was mostly made of shredded plastic from our camp, with grass & stems like stems at the bottom & a dirt-like layer. Not many obvious parasites. Nest c. 2" x 4" x 2" deep. Contained 1 haired, open-eyed, dolphin young, but Dr. Miller had taken a lactating & and other young may have left. ~~It~~ ^{Rat} was squeaking loudly when Dr. Bartholomew found the nest site, which is right in the camp area. Saw 1 Sooty Gull flying N over the camp area about 6:20, the latest I have ever seen one out. In the evening everyone tried to get Phil. (geographic ~~place~~ ^{place} subscriptions from ~~Schulte~~ (he is a N.G. photographer), and we heard about the current Vietnam & Cyprus crises on the short wave. Same old world. 2 Marine Iguana egg burrows in camp now. Two other notes. While coming in heard 3 or 4 times a coo-coo like koo koo koo koo, deep, 1st note deeper. ? Coccyzus. Never saw the animal. Saw a Hawk about noon near the remains of the groupers ~~being prepared~~ ^{which were for} dinner tonight. Didn't see it eat any of it. The Orizonyx nest were contained many small bones outside, a little more dispersed, but otherwise like the piles out on the lava, and near the mangrove lots of very white mouse scats. Lots of insects come in to the lamp tonight, including a queen lacewing. Quit about 9. Done in camp in the A.M.
1 Feb. woke up about 5. About 5:35 became aware of 2 Frigate birds flying N from the mangroves. First aware of Yellow Warbler song by 5:37. Overcast and dark. Song sporadic at 1st, then more constant for a while, all away from camp area. Few scattered (6-8) Frigate birds left. About 5:47 about 35




Feb 1
~~Jan 31~~

Punta Espinosa, Fernandina Island, Galapagos.
got up at one and circled to the N. Yellow Warbler song
consistent now. All the Frigate I have seen were going N. 5:52
a swarm of 16[±] + 2 separate Frigates formed by aggregation
of groups of from 2-4 birds and gradually circled N.
5:56 flock of 10, circled N, breaking into 2 groups of 5. A few
single birds in between. heard 1st tattler at 5:58 Y. Warbler
drip now, almost no song. 6:02 heard Semipal. Plover "cheeee"
and a ? Turnstone or Morker. can see the pale color on
Frigate birds now and c. 5 came back S. 6:07. heard
Oystercatcher. 6:17. few of a simpler Yellow Warbler song
than I heard earlier 3: ^{swē to do} ^{swē to do}; 1st finches leaving
the mangroves now. 6:23. Saw a 5" (total length) Tropicurus
active. Stopped at this Pt. A couple of Ad. hans fuliginosus
showed up during breakfast and Brown Pelicans and Blue-
footed Boobies conspicuous ^{by 6:30} ~~by~~ ^{day}. Picked the baby Orizomys.
The nest site is blind at one end, but is accessible by a lava fissure
from the beach side. The nest was in exposed lava 8 yards from
the mangrove & about a fm from the sandy beach. The crevice
formed a sheltered runway to the mangroves. little droppings
near the nest but several scattered boxes. The nest and crevice bottom
is floored by fine sand, and littered by small bits of bone, possibly, stems from
mangrove berries and leaves. A few mouse droppings, while
in open places on the lava. 2-3 yds from the nest. The nest material
earlier described as straw is strips of mangrove bark $\frac{1}{8}$ - $\frac{1}{4}$ in wide and
1 - 4 (^{max} $1\frac{1}{4}$ - $1\frac{1}{2}$ ") long. largest piece of bark $2\frac{1}{2}$ " long \times $\frac{1}{2}$ " wide.
from a fairly large branch. little indication of reuse of nest site,
beyond ^{humps} ~~the lava~~ beneath. a few nest material fragments below

1 Feb.

Punta Espinosa, Fernandina Island, Galapagos.
the active nest, which contained a second line juvenile mouse. This was just 3-4 sticks on a pile of fine sandy humus, dry, as was the original nest. The site must have been reached through the passageway between the two vertical lava blocks. After preserving the 2nd mouse I went with Ross Kieste to see the Night Heron Nest. We stomped around in the lava for a while and finally found the nest under a low mangrove against a lava ledge above high tide level. Lots of tropicbirds here. The heron was nervous because of our presence but stayed on the nest. The bird is very small, hardly larger than a Green Heron, and very slim at the neck, quite unlike a Black-cr. We saw the imm. Hawk in a mangrove here. Saw a striped young Green Heron. Went into a neck up posture - a bittern pose with the bill horizontal. We then worked out to a large grove of Mangrove around a large lagoon, which was mostly inaccessible. The mangrove was 20'-30' high (instead of less than 20'), and about 15 yards thick. We clambered into it sat for a while, then squeaked. Got in 3 plumaged finches, one? Camachyrus parvulus, a Pi. fuliginosa, and a ? G. difficilis, a brown headed, white bellied bird, spotted breast, buffy wing bars, bill  like a short cactus sp. Same size as Fuliginosa or smaller. Miller shot 2 birds with same bill. Also a pair of mockers and 10-20 Yellow Warblers. Saw one absolutely white below from the bill to the under tail coverts & ∴ looked much like a Myiarchus. It was perched out on the lava, and later was chased by a ♂. A juv. Green Heron in mangroves. It followed us about for a while,

1 Feb.

Punta Espinosa, Fernandina Island, Galapagos
going into the same "bitten stance" when scared. Tail flipping
conspicuous. Watched mockers forage for some time. They feed
on branches 1 to 4" in diameter. It ran 6" to 1 ft, depending
largely on the density of the vegetation. Tail flicked c. 15 to
20-25°, frequently (every 2 sec. or so) and usually spread
slightly when raised, from  to  but sometimes
rounded so that the white was very conspicuous. . No wing
flush except (balance?) when the bird hopped and this hardly
noticeable. The bird pees intently up (and down less often),
from each perch but did not feed at each. Take prey from
surface most of time, either top or bottom of branch or
from tip of broken twig. Once spent some time breaking
very thin mangrove bark. From the point the white tail tips are
very conspicuous on the flash. Behavior reminds me of Savanna's
Thrush but more active. Like a stirred up Steller Jay. Heard
a few odd songs in the mangrove. Came back along the lagoon,
and bay. Saw 3 7ft white tip sharks; spent half an hour
dropping boulders on them. 3 Brown Pelican Nests in
the low mangroves, 1 c 10', 1 c 7', 1 c. 12' from the ground. all
had downy young with flight feathers, which screamed lustily.
~~The~~ ^(each) adult remained at 2 nests and 1 nest was left alone. The nests
were quite sunny. A pair of Great-blue Herons and a couple of
Penguins on the rocks. Saw 5 Cormorants basking. At least
5 Semipal. Plover, 2 Whimbrels, 25 Rudy Turnstones, 15 Wanders
Tattlers along here on sandy shallows. Didn't see any gulls.
The Marine Iguanas even about a mile from the camp are
fairly shy and dive for cover when one approaches. Out by the far

1 Feb

Punta Espinosa, Fernandina Island, Galapagos
lagoon, saw many mouse scats scattered on the open lava.
No obvious runways or other sign. Few gulls around.
Drs. Miller, Bartholomew, Carpenter & Miller and Mike Caston
went W along the coast and came back about noon with
5 lovely red and orange headed Iguanas. Dr. Miller
shot 2 doves, several finches, a Noddy, 4 Puffins
and a Laughing Gull. Skinned the gull & a Puffin.
The former (laure) had almost black feet, blackish bill except
for red coming in at the base of the lower mandible. The
Puffins had a ~~blackish~~^{greyish-blue} bill, and the feet were flesh colored
on the inside and bluish on the outside. The winging is
frosty grey, not white so that the flash is mechanical
reflection, and the back is very black. One contained the
pink shrimp like the Oceanites yesterday; the one I skinned
contained a soft gelatinaceous mass (? squid or octopus).
Dr. Miller shot them in a feeding assemblage on the way
from the Iguana spot to the camp. Spent almost all
afternoon skinning. Had the local lobster which is a little
more bitter than the one I ate in Academy Bay. Tide very high in
the afternoon and washing away the beach. The odd "cockoo"
turned out to be Green Heron. Peterson caught what must have
been a freshly fledged Penguin and brought it into camp
last night, released it in a lagoon and it disappeared during
the night. Dave Pearson found 2 Amphispiza eggs
in a burrow today; they were c. $3 \times 1\frac{1}{2}$ ", and weighed 74^{F} gm.
Shell white and leathery-smooth, almost rubbery. Saw Cereus
Cactus growing within 2 feet of the mangroves.

1964

(72)

2 Feb.

Punta Copinosa, Fernandina Is., Galapagos.
became aware of Yellow Warbler song about 5:27. Frigate
birds coming out of the mangroves in 2s, 3s + 4s, flying directly
without circling. One large departure of c. 15 birds.
Most birds out by 5:45 and most yellow Warblers quit
singing + began chirping by this time. Got up early and
didn't do much. A Crotopiza singing in camp. Dr.
Miller shot an ad. and a bird molting from 1st to 2nd year
plumage - head and neck dark with no clean hood)
Larus fuliginosus. Poked along the shore for a while, then
took Dr. Miller's pistol and hiked around the large
lagoon Kiester and I visited yesterday. Went there directly,
shooting a Mocker at the start. It was foraging on the
ground at the base of mangrove roots. The mangroves along
the N side of the lagoon are 25 ft high + c. 15 ft. thick
going to a secondary channel. Yellow Warblers were very
common in this and mockers spaced along the trees.
The Warblers frequently fly out 50' to perch on the lava, then
fly in. Can't see if they are feeding. Many 5th inch Tropid-
urus along here. Saw 3 G. fuliginosus along here, + 1
Semi pal. Plover + 6 Ruddy Turnstones. Along the W side
the mangrove run 5-10' higher, and are 55 to 75 feet
thick, very dense. Some dry, soft ~~soil~~ ^{soil} bottomed pools
here; saw a mocker industriously picking up mangrove
leaves and flipping them back side (one motion) or thrasher-
like flipping leaves side to side. It was picking up food
from the ground and swallowing it. ~~Shot at~~ ^{shot at} it but missed.
Saw a nice black G. fuliginosus here, and flushed 2

1964

2 Feb

Punta Zapinosa.Fernandina I. Fernandina Is., Galapagos.

immature Night Herons from dense bushes. They are almost as dark as the adults, finely spotted, and have a very thin head and neck

which is quite distinctive compared




to Black-c. Night Heron. They were silent and wouldn't fly except to move deeper into the mangrove. Yellow Warblers and Mockers distributed along here as earlier.


The S side of the lagoon ~~visited~~ yesterday. Saw the

"Camarhynchus" but now think it is a fuliginosa. Two



types of song here from black ♂ Geospiza. One is "chan woi woi" with 1 to 3, usu. 3, "woi." syllables ^{in each song} ~~after~~. Also heard

the high pitched whistle. The ^{bird} ~~set~~ of this bird is approx. 


? G. fuliginosa or forbesi. Two ♂s sang a double to triple "cha woi" song, ^{much higher pitched than the other song.} ~~which~~

a little buzzy. bill thin and pointed . The ♀ I thought was Helicobates is evidently this form - ? difficilis. Miller

is getting birds like this too. Saw a mocker wing flashing again. The coverts are lifted from vertical to horizontal, but not out from the body, and the outer primary dropped to the ground. The flash is about 1/4 sec ± song, + usu. 4-6 in a series. Tail fanning seems to be more frequent in tail flip than I ³ thought. Tail normally

canide  and flipped to  in a smooth up movement, held momentarily and dropped. the widest spread of feathers is at top of the arc. Shot and ad. mockers but didn't get anything else. Saw no more finches except in camp. Found lots of mouse

2 Feb.

Punta Espinosa, Fernandina Island, Galapagos.
droppings on the rocks + 8[±] larger ? seeds, 4" long x 1/2" in dia composed
of cactus spine spines and sheets of what looks like mangrove leaves.
Don't have any idea of what might produce them. They are not esp.
white and all are old and dry. shape: . Cactus
mixed all through them without being much evident on the exterior.
Got in camp about 1:30, ate lunch. Preserved one mouse,
skinned the other, and weighed out a Sooty Gull skull for
Dr. Miller. Finished one roll of film with a hawk, a
couple of comets, and some Isabella pictures. Not much
else doing the rest of the evening. Set 2 traps in a large
group of cactus which seems to have many holes leading
to the interior and on the way back put my foot into a
snake and smashed up my thumb on the tail. Started
Dave Pearlman's copy of Edgar R. Burroughs At The Earth's Core.
The helicopter came in today and took away
Kiesler, Schulte, Pearlman, Osinger, and deposited
Steve Billeb ^{him} ~~him~~ place. Made a horrible racket and nearly
blew our tents over. Not as many water birds around as
usual although I was away from camp most of the time.
Dr. Miller got a Finch or an Iguana with ticks in the gullet.
The mouse I skinned had dark blue-grey feet & legs with
yellowish foot pads. Sooty Gull has red mouth lining and
red eyelid in adult. Not so many bugs at the lamp tonight.

3 Feb.

overslept the frigate birds. Cloudy when I got up but
soon became warm and sunny. Finished At the Earth's Core
Dr. Miller got 3 more rats. Both my traps were sprung and
one had the bait gone. Went out with Steve Billeb & Dietrich

3 Feb

Punta Espinosa, Fernandina Island, Galapagos.
along the shore of camp. Just out of camp DiBlinc
caught a small Dromicus which I kept. It was crawling
slowly and was at the edge of a crevice in the open lava c.
15 feet from the mangroves. Lots of Tropidurus here.
Found a Geospiza feeding in a dry pothole on soft,
yellowish soil, but missed it with the pistol. Then went
out and shot another in a group of marine iguanas; it
was feeding on the ground near the iguanas + crawled
on them but didn't peck on them. Went back to the
pot ~~hole~~ and shot the finch I missed before; then
I got a mocker near some low mangroves, and a black
male Geospiza which was also feeding in and near
a large group of Amblychynchus. It occa. probed into the
axilla and groin, but didn't seem to find anything. All
the finches I got are the same kind, probably difficilis accord-
ing to Billeb. Took a ♂ Yellow Warbler in transition plumage
and came in to skin my birds. Spent most of the midday
cloring this. The Yellow Warbler had enlarged testes. Feet
pink with yellowish pads. Stomach full of small, unrecognizable
insect remains, prob. the small flies that come to the camp at
night. All the finches contained small sand grit (1st mm dia.
grains), and a yellowish, ^{soft} spiny seed ~~bit~~ about 1 $\frac{1}{2}$ mm. long. No
sign of ticks. The two drab birds were both molting the inner primaries,
and showed a little body molt. The mocker had blue-grey
legs + feet with yellowish foot pads. Stomach contained
well washed insect parts, including one of the large colorful
grasshoppers. Didn't molt. The snake's eyes were dark

Feb 3

Punta Espinosa, Fernandina Island, Galapagos.

Known with a crossy rim to the iris in life, the tongue red with a black tip. Tried to bite (gaped) when caught. Dr. Miller got a few more finches & mockers, and Ortiz caught an injured Penguin which Miller will skeletonize. Spent the afternoon bothering sea lions and took a couple more pictures. Clear, then cloudy and a little rain in the evening. Beautiful surf in the late afternoon. About 6 most of the Frigatebirds on the Pt got and started circling higher and higher, up to sev. Hundred feet. About 100-125. Hawks joined them. The mockers in camp very good now, comes right into the tent area. In the evening, Penguins come up to the eaves to roost but too dark for pictures. Yellow Warblers sounded off, chips, about 6. Chuck Carpenter had the hand Iguanas out to photograph ~~the~~ but all they would do is sit and then run off. The scat of this species is exactly like those I found by the lagoon yesterday, both in size and composition. Had trouble with the lantern at night; everyone sat around and talked. 2 real jems. Dietline was explaining about the lemonade we had yesterday; he and Dean Amador were sneaking a glass when Chas. Carpenter came along. They made him a 3rd glass; like this it was c. $\frac{1}{3}$ conc. lemon juice & the rest water. (made 2 gallons of ~~strong~~ lemonade.). Carpenter had taken the first drink, prompting Dietline's remark: "Dean and I were sneaking a drink when Chuck came along and caught us and we gave him a glass and it saved him right....." This sent everyone into hysterics. Billeb was talking about marriage, he a veteran of 2 months, and sounded really fed up with

P. DeBenedictis
1964

(17)

Feb 3

Punta Espinosa, Fernandina Island, Galapagos.

It all: e.g. Welker: "how long you've been married anyway?". Billeb: "two months. Just long enough to be tired of it". and, after asking why his wife wasn't here, (someone). "why didn't she fly down?". Billeb: "How? On her back?" Can tell it's a long camp. Peterson took a picture of a bull sea lion with a Star Trek camera, and all sorts of marine iguanas digging nest ~~etc~~ ^{holes} now. Rained a little during the night; wind from the E; found out what I have been calling N is West, so adjust all earlier notes appropriately. 2 Orizomys come in to the cooking area at night, nice big ones, and Ortiz nearly caught one in a box of oatmeal. They are not very shy but don't like to be in the light. Last night they chewed up a 1/2 a roll of toilet paper for nest material.

Feb 4

Packing to leave now. Pickled Kiest's snake after taking a couple of pictures of it. Not much doing today. Poked around the point but not much to see. Took a lot of pictures of various animals and places about the point. Got right up to the cormorants and could see the nuchal dip clearly. Saw finches picking ticks off iguanas twice. A lot of this seems to be incidental to foraging on the ground near the iguanas but the birds clearly probe into the axilla, groin, vent, and vertebral areas of the lizards. The Marine iguanas are really nesting now: perhaps a hundred or so are exploring and/or digging on the two sandy areas near camp. After 4 or 5 to a burrow. Not many successfully completed, and the iguanas flush off whenever one or seabird approach. Saw several very small Tropidurus. One very tame Green Heron on the Pt and penguins swimming in very close. About 10 the helicopter delivered

Feb 21

Punta Espinosa, Fernandina Island, Galapagos.
Allan Cox to take some lava samples and took him out to show him where the plate areas of the rough lava were. In one of the pools saw fish 18" inches long, longer than I recall seeing in the pools before. Very hot, clear but windy, in the A.M. Packed in the late A.M. + early P.M., then helped Cox with his sampling for a little. Spent the late afternoon taking a few more pictures, trying to find a penguin on the land. No luck in the latter. A large group of Blue-footed Boobies was diving N of the pt. over a school of 30+ porpoise. After the porpoise ~~left~~ the boobies all settled on the water, departing more or less singly to S. + W. + N. of the point of of the afternoon - 2+ hours. The flock circled about so that birds dove into the wind, circled away from the wind. A couple of frigate birds in the flock added much to the confusion. Puffins and Noddies + a few Oceanites working slowly and disinterestedly around the distant edge of the group but not obviously in the center. Boobies dive from c. 75' up, stay under 1-2 sec. Closer to shore, single Boobies were seen diving from much lower heights, often only 10-15' and come up almost immediately. Shortly after this, saw a group of 25-30 Noddies working, also in a rough circular pattern just of the surface. When feeding the sight is of the jerky quality of a Bonaparte's Gull, but the wing beat is much more shadow. They feed by dipping ^{gently} to the surface of the water and picking off surface animals much like h. philadelphia. When they decide to fly from one place to another their flight is more Sterna-like, with the "swept-back" quality,

DeBenedictis
1964

Feb 4

Punta Espinosa, Fernandina Island, Galapagos.
especially of the wing, tip and tail, of Elegant Tern. A few
Oceanitis gracilis working very close to shore. One of the
Nannoplum was resting on the point, quite dry, head
under the wing, and clearly dripping salt from under the
wing. Saw one come in, very wet; as it approached looked
under the water 3 times, each time in between raising
the head high, bill bill up and shaking the head
vigorously, as if a splashing movement. Considerable head
and neck feather erection at this time. Floated in close
to shore, waited for a wave and washed up on a ledge, stood
up, and walked up about 2 feet until the water went out,
then stopped until the next wave came in when it washed in
about 4 feet farther, and walked up to dry when the ~~wave~~^{wave} went
out. Shook the head and neck a lot, flapped the wings but
didn't sun for ¹⁻²~~5-10~~ minutes, at least. Last pictures were of
a green heron in the surf, which caused me to get my
feet wet. Spent the evening on the beach watching the tide
and sea lions come in. Very little sea bird activity. A
cold windy night. Not much exciting now. Almost everyone
seems to be glad to leave now; our stay was just about the
right length for what we wanted. Didn't see any Oryzomys
in the food, but flushed one from a lava crevice and saw a
small one working on the ground at the edge of the lava
under the mangroves. Very cold and windy during the
night and wake up several times.

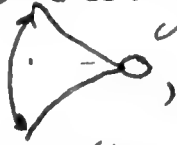
Feb 5.


About 2 A.M. there was a general commotion as
we were ~~rounded~~^{rounded} up to board the Ecuadorian Patrol


Feb 5 Ecuadorian Patrol Boat, Fernandina to off S. Isabella Is. Galapagos.
Boat back to Academy Bay. We left the Pt. at 3:30
and I tried to sleep until light. Overcast and very
windy, the boat ride very rough. Between 6:30 and 8 AM
attempted to census the birds etc. seen:

TIME:	<u>PUFFINUS L.</u>	<u>O. gracilis</u>	<u>C. tethys</u>	<u>O. castro</u>	<u>Frigatebird.</u>	<u>Sula</u>	<u>dad.</u>
6:30 - 7:00	6	35	1	—	8	—	—
7:00 - 7:30	25+	—	1	—	1	—	—
7:30 - 8:00	150-200	25	10	3	2	2	2

	<u>North. Frigate</u>	<u>Brown Noddy</u>	<u>Sea lion</u>
6:30 - 7:00	—	—	—
7:00 - 7:30	—	2	—
7:30 - 8:00	4	—	4

numbers something less than the last half hour were
the rule for most of the day. Early in the AM. most
of the O. gracilis were flying about 10 feet off the water,
c. 4 wingbeats/sec, the wing beat about as deep as one wing
was long as as high above the body as deep below it ,
flap for 1-3 seconds, then glide for 1-3 sec, usually glide for a
shorter time than the flap, flying more or less straight until some-
thing in the water seen, when the bird circles back, turning
the tail, and drops to or near the water's surface.


 path of flight
water surface. | land on the water

with the wings raised and remain only less than 1/2 a sec.
Glides with down curved wings.  Oceanodroma

5 Feb


on board Ecuadorian Patrol Boat, off S. Isabella Is., Galapagos.
flies with a jerkier wing wingbeat and the wing seems to be
held farther below the body than above. Later in the day saw
a little pattering but not much. They flew lower to the water
as the sun went up. Very few birds along the SW part of
Isabella, mostly Puffinus h. h. hemineri. Saw 1 nice ad.
Red-billed Tropic bird flying over the boat. A few small
rain squalls and constant overcast. Much salt spray.
Raining on Isabella. Most of the few Boobie here are
dactylactis. Slept a lot. Petrels about $\frac{1}{2}$ & $\frac{1}{2}$ O. gracilis
and O. tethys, the latter more uniformly dispersed
than gracilis. Saw a Penguin about hour before we
got to Tortuga Is. No Tropic birds here this time.
Very few birds from here on until we got well in to the channel
between Santa Cruz & Isabella, when, c. 1 hr. before we
began to see " " , we saw large #s of Northern Phalaropes,
sitting on the water and spinning a little. Almost no
petrels here but large #s of Audubon Shearwaters mixed
with them and feeding, more or less singly, although it
was by no means unusual to / fresh bands of 8-10 Puffinus.
They fled from a rapid flight, about same wingbeat as O. gracilis
but wings stiff and stroke ~~much~~ shallower, c. $\frac{2}{3}$ wing length,
and less gliding. fly 4-5 feet off the water for 10-15 feet
when food plentiful, and drop down quickly, without circling,
holding the wings horizontally out, or a little closed;
only head under the water most of the time but the birds
will ~~stay~~ ^{climb} for 1+ sec. when necessary, (near the boat) sur-
facing and ^{then} flying off almost immediately after. Got off

5 Feb.

on board Ecuadoria Patrol Boat off Santa Cruz Is., Galapagos.
the water very rapidly in this wind, although a run of 8th fl.
is still necessary, as seems to be the case in other Puffinus. sp.
The drop flight is similar to the plunge of P. griseus but
hemionis seems to dive less often. Often they glide
rising 20-25 feet from the surface, well above the horizon,
and look much longer than they are. The white flash
of the underwing remains very prominent in spite of the
true ashy color there. paler when lighted is:
and in the sun they look very brown above, while
in clouds they are quite black. The short wing &
stocky appearance plus the rapid flight is probably a very
good field recognition character for this sp. & P. assimilis.
As we approached Academy Bay we saw increasing
groups of 2-4 Noddies, mostly flying 10-15' over the water
and many ^{singles} Blue-footed Boobies. In Academy Bay
there were two Boobies landed on "The Barranca" and
when a third came in saw a little display involving a tail
and ~~head~~ ^{tail up} postures, with vocalizations, following which one
of the interested birds left. Several Noddies on the cliff. They
make a long (1/2 sec). low, soft, ratchet sound, "rrrrrrrr" as
they fly along about to land. Saw an adult feed a young (2/3
grown) bird from an upright posture, bill down. Young begging
from hunched with bill up. ^{ya}  -adult ~~the~~.

the young bird
gave a high pitch, descending squeal. Very little other behavior.
must be very late in the season. 8 Sooty gulls on the
rocks at the W end of town. together, both ads. & imm. Vocal

5 Feb.

Academy Bay, Santa Cruz Island, Galapagos.
Out to far off, to see see much of what they were doing. About 15 Puffinus circling about in the calm of the Bay, and several flew into crevices in the Bananah, between 5 + 5:30. One flew in, stayed tail out, 1 sec., flew out, circles c. 5 sec., & then went in to stay. Saw 3 birds go in another large crevice at once. Most of the crevices they enter are only 2-3 feet above high tide level. ~~handed at the station~~ ^{11 large rays, shaped like}  were circling in the bay near the boat. Golden-brown, uniform, above, white, iridescent to gold, below; Walker said they are not recorded from the Galapagos! (what ever they are). Handed at the station about 6.
Bob ~~the~~ ^{Pyle} gave me a skull (pick up) of a Pterodroma phaeopygia which he brought in this evening from the W side of of Copa Hill, 570 m., Santa Cruz Is. He found the skull with a few other bones (which he will get later) in front of two burrows (which he said are exactly like ^{those of} the Hawaiian subsp.) in the fern, grass land, Miconia belt. He said the Hornsman's told him the petrels nest "in the fall" and are not to be seen during the rest of the year. Trained to the highlands still open.

6 Feb

woken at 6 A.M by Dr. Miller to help him and Nate Cohen unload a few chests from the patrol boat. We went out without incident; there was a Noddy calling by the cliffs but didn't see much else. Tide fairly high. Came back about 6:30 & spent the next half hour carrying boxes to Dr. Miller's room (in a wheelbarrow). Saw an ad, a 1st yr. & a 2nd year Sooty Gull on the dock. The Tropicurus look much more spotted and

6 Feb

Academy Bay, Santa Cruz Island, Galapagos.

much greener here than on Hood. After breakfast, went with Dr. Miller and an Ecuadorian E along the shore to a couple of salt lagoons to look for Teal. A few Marine Iguanas: The ♂s are orange, one with fairly green spines, than on Espinosa but they are not as obviously nesting (1 hole, no ♀). Saw 1 Green Heron along the shore. The 1st pond was about 25' ft in from the ocean, separated by a high rise, S shaped, about 30' long, each arm 10-20' wide., and 4-8" deep, with a soft muddy bottom. A narrow wet grass margin to the pond and bushes beyond this, so grass strip 4' feet wide. A little sandy mud border in some places. A pair of teal, one of which quacked like a mallard "'wack" 'wack 'wack" as they flushed. Red on bill of ♂ conspicuous and in flight show much pale buff along the trailing edge of the wings & tail, speculum indistinct. Also a Black-necked Stilt and a Green Heron, with pink legs, here. The other pond opened almost on the ocean, 60' long x 25' wide, U shaped, with similar bottom and a wider beach grown to a flat blanket ice plant. Nothing here except 1 Green Heron. Saw a young Noddy along the shore & 3 Blue footed Boobies on the way back. Also saw a Cuckoo in flight near the domes on the way down. After this went with Dr. Miller into the barranco near the Seismograph station. Lots of finches as usual. A ♂ fortis as a nest repeated gave a descending rough "tunnnnn" call, c. 1/4-1/2 sec. long, this call not carrying far and sounding sweeter at a distance. Collected a mocker,

DeBenedictis
1964

(89)

6 Feb

Academy Bay, Santa Cruz Island, Galapagos.

one of a pair, of which Dr. Miller got the ♂. The ♀ was feeding a young bird, out of the nest and barely able to fly, with down patches & wisps on the head. She had a dry brood patch, ~~and~~ ^{but} her ovary looked like it was ready to go, with three 2½ mm ova and no sign of older ova. Stomach contained several seeds of Opuntia and the head of a cerambycid beetle. Saw one of the pair feeding on the ground, running about and picking food from the ground. One spent 5± seconds ⁱⁿ ~~on~~ a fallen Opuntia pad. Although there was a fair amount of little saw no thrashing. No wing flashing and not much tail flipping. The ♂ stomach contained a ^(?) Cordia pit & several seeds of Opuntia. Heard a very deep Geospiza song and found a nice black ♂ magnirostris which I collected on the top of a Scaevola bush. Blog Cutler saved the syrinx of this. ^{the} Over towards the barranco heard the "chi" ^{warrrrrrr} song of Platyspiza and took a beautiful ♂. It is a large bird, even larger than the magnirostris but does not have nearly the jaw musculature of his "mag". G. fortis, fuliginosa, and scaevola were quite common along here, and Camarhynchus parvulus and Yellow Warblers less common. Saw three Myiarchus pressing in & tree together, like soft Ash-thr. calls. 2 flew off leaving one alone, which later disappeared. Along the barranca saw a large finch in a tree and shot it hoping for another cranirostris but it turned out to be a ♀ fortis with a brood patch, not very thick but definitely vascular. Crop full of a small greenish seed,

1964

6 Feb

Academy Bay, Santa Cruz Island, Galapagos.
 prob. (cordia)? or the tree from which I shot it (palo santo).
 The ovary showed signs of future laying. The jaw musculature
 is very much smaller than megascotis and although I
 thought I had the latter when I shot it, it became obvious
 that it was fortis when the two birds were compared. The internal
 jaw structure may prove to be the best way to tell these species
 apart. Heard a little cuckoo song, and both a sharp and
 a dull Camarhynchus parvulus song, seeing birds sing
 each. Heard Certhidea singing along the barranca
 ("punta song") and about 1/2 way from the ^{barranca} ~~station~~ to the
 Dormitory. Saw 2⁺ Martins circling along the cliff here;
 Dr. Miller shot a (?) and later saw one fly from ~~a cliff~~ ^{the cliff}.
 It is a small martin with a very deeply forked tail.
 About this time I got both feet wedged in the lava and
 fell on my face cutting open my forehead above the
 nose. On the way back Dr. Miller fell over a log and landed
 painfully on a small Opuntia. Dr. Martin took care
 of me when I got back and spent the rest of the afternoon
 after lunch, skinning, very slowly, the birds I shot. ^{B. Goffe} ~~also~~
 also kept the skins of the Platyspiza. Dr. Miller got a singing
 male in brown plumage whose ~~brother~~ ^I fellower. Saw adult
 feeding nearly fledged scandens and nests of fortis, and
fuliginosa. ~~and~~ Not much done in the afternoon. Studied
 a movie (Bell-Telephone Science series) in town now.
 Got another E. Rice Burroughs novel from Reelman.
 Dr. Miller packing to leave tomorrow.

7 Feb

Acahuan Bay. Santa Cruz Island. Galapagos.
woke up to a small rain shower which lasted half an hour. Lots of song before and after the shower but not much during the rain. Spent the morning writing letters and didn't see or do much. In the afternoon went with Steve Billeb out towards the lagoon by the seismograph station. Heard 4 Arremonops along the trail all giving the "brun brun brun" song. A Platyspiza was singing from almost the same spot where I shot the ♂ yesterday. Took several pictures of this area including 1 or 2 of the Tropidurus. The finches are nesting like mad. Saw nests of fortis and caeruleus. Only 1 Myiarchus seen today, no martins. Heard half a dozen cockoos. Earlier in the A.M. saw a dove flying over the dome area. Shot a Camarhynchus which was industriously tearing the bark from a dead looking palo santo (Cholon) tree. The crop was full of an unidentifiable yellowish mash and small (1+ mm.) grains of sand. The bird was working sideways on the tree about 6' up, tearing off pieces of bark c. 1/2 x 1" in size. Didn't seem to be catching much. In the afternoon skinned out the Camarhynchus and finished the ~~pet~~ ^{Burroughs} novel I started. Found a delightful passage on revolution about half way through. Dr. Miller took off for home about 2. Planned with Bob Pyle to go to Tortuga Bay tomorrow. Very uneventful day today.

1967

8 Feb.

Academy Bay to Tortuga Bay, Santa Cruz Is. Galapagos
went with Bob Pyle to Tortuga Bay with Bob Pyle.
Saw 2 martins flying over Rombek's before we left.
Took a skiff from the station to the far variance of Academy
Bay. Saw very few birds, mostly Fregata, on the crossing
but at the far variance there were half a dozen Sooty
Gulls, screaming loudly, giving both the long call
and a "krow" note. From here we cut across a very
open cactus forest, dominated by Opuntia trees 15-20 ft.
tall, spaced about 20 feet apart, with low dry Cacton and
very low velvet plants in between. Soil soft and red, with
~~red~~ ^{small} sharp lava rocks in between, which sink into the
soil when one steps on them. Passage through this forest
is very easy. We angled across the point, seeing mostly
Geospiza fortis, fuliginosa and scandens + a few Yellow
Warblers. The beach here was of large (10-12") cobble
stones of lava, with a coarse yellowish sand beach
behind, in which marine Iguanas were digging
furiously. These were very shy and ran to the water
or into the ~~water~~ ^{bushes} when we approached. Several very large
(3-4 ft) males with good orange mottling. Same sort of
land birds here as before, except warblers were common
than the finches. Along the shore there were scattered
Tattlers (6-8), Ruddy Turnstones (a many), Wimbrels (8-10),
and we saw 3 Green Herons and 2 Great Blue Herons.
Tropidurus, including many very small ones, quite common
at the edge of the beach, but other vertebrates hardly in
evidence. Goat droppings everywhere. About half way to


8 Feb

Tortuga Bay, Santa Cruz Island, Galapagos.
In the bay the sandy beach almost completely disappeared, but marine Iguanas were present and digging in the sand in much the same fashion as before. Most of the iguanas were alone, but saw one herd. Found a few fragments of whale bone, prob. upper vertebrae, and picked up a few large snail shells. A couple of Semipalmated Plovers, plus about the same #s of the other birds as before. Much of the lava here is very water worn. About the last 3/8 mile before Tortuga Bay is a beautiful white, fine (like granulated sugar) coral sand beach, shallow and with a long surf. The sand was firm and level near the waves, full of sand crabs, and built to dunes with the open cactus/reat behind farther in. There were about 10 Marine Iguanas along the beach, which took to the water when we approached, ~~plus~~ but no signs of nesting. On two rock jetties in the beach there were 5⁺ Tattlers, 8⁺ Turnstones, 3 Black-bellies and 4 Semipalmated Plovers, and along the sand were 5-8 Wimbrels and about 50 Sanderlings. about 4 Brown Noddies working in the surf, and 2 Sooty Gulls flew over the beach. Found a very dead mask & Booby. had a dozen Brown Pelicans along this stretch. Tortuga Bay was just beyond this. When we arrived there was an imm. Sterna of the common-aile type, which I shot, flying over the bay and resting on the ~~water~~ ^{slope} of the bay. The E end of the bay was a sandy beach, while the N and S sides were

1964

(89)

Feb 8

Tortuga Bay, Santa Cruz Island, Galapagos
much grown to low mangroves (15-25' high and as wide). The bay runs about a quarter mile in from the west and is smooth and well protected. No birds but a few marine iguanas in it; frigate birds flying over and a few (4-6) Great Blue Herons along the edge. We walked out to the end of the S jetty, seeing several frigate birds, all magnificens, and 20⁺ Turnstones, 10 Tattlers, 2 Black-Bellied Plover, 1 Semipal. Plover, 6-8 whimbrel; lots of Yellow Warblers and ~~counters~~ ^{Tropidurus} along the shore plus the same finches as before; a lot of Opuntia along here and several dead goats. Somewhat of a browz line on the mangroves. We then circled back and went around the bay along the N side. The forest here was quite dense, with Opuntia and mesquite, here 6-8' tall, making the passage rather sticky. Spiderwebs all over the place, most with a black and yellow -shaped beast in the middle. got so bad I knocked them down with a stick. There was a dry lagoon at the NE end of the bay, and beyond this 3 small, muddy puddles, with 3 Stilts, 4 Wimbrels, a Black-bellied Plover, 2 Semipalmated Plover and 13 Blue-winged Teal, the latter of which flew off to the W end of the bay. The rest of the shore was dry, except along the water's edge. Saw 6⁺ Mockingbirds here, the only we saw on the hike except at Academy Bay. When we got to the W end of the Bay, 2 Common Egrets (C. alba) flushed from a mangrove. 3 Great Blue herons plus 2 Brown Pelican nests. In a large salt


Feb 8

Tortuga Bay to Academy Bay; Santa Cruz, Galapagos.
lagoon (100 x 250 yards), 2-12" deep, we found the
Teal we flushed before + 6 others for a total of 19. When
we clambered to the edge 6 Flamingos flew out over
us, and a seventh flew up and landed in the lagoon.
All seven later came back and spent the rest of the time
in the lagoon paying no attention to us. They feed slowly,
arching the ~~neck~~^{neck}, just like in a zoo. One or two birds called
more or less frequently, raising the neck and spreading
the wings and giving a single throaty "work" call. There
were 3 Stits here, and 20, and a 4 Galapagos Teal. We
walked around the lagoon seeing 6-8 Whimbrels, 3
^{6 Tattlers, 30 Ruddy Turnstones}
Black-bellied Plover, 6 Semipalmated Plover, 3 Sanderling,
3 Spotted Sandpiper, 8 Least Sandpiper, and 2 "Semipal-
mated" (probably, they were much shorter billed, with no terminal
al droop than any Western I have ever seen) Sandpipers.
Several Frigate birds were playing overhead. We cut out
the coast seeing a few more Tattlers and a flock of 15⁺
Ruddy Turnstones. By this time we were exhausted and
walked back without paying much attention to the birds.
We had to walk back and walked along the shore almost
to the ~~bay~~^{bay}, then angled across to the far barranco, went
around that part of the Bay (hearing Camarhynchus for
the first time) and ended up in Dufor's backyard. At
the barranco there were about 8 Sooty gulls, 4 sitting on
the rocks giving "know" notes continuously, and 3⁺ birds
flying to them, away, and back so on. When I couldn't
see them heard long calls. Several birds, one giving an

Feb 8. Academy Bay, Santa Cruz Island, Galapagos.
aerial honey Cuck, at Dufos. The Dufos invited us into
their house and gave some most refreshing lemonade,
and guided us to the far bananaes. Didn't see any
Noddies or Puffins along the bananaes, but as we
were clambering down the cliff opposite the public dock
a Belted Kingfisher came rattling out of the mangroves
and flew off towards Angermeyer's; could see the grey-
blue back, white in the wings, short tail and long beak
clearly. Only seen from the top and couldn't tell what
sex it was. We got a ride across the bananaes; and
went to Devine's for a beer, where we found several other
members of the expedition including Bowman. We
spent $\frac{3}{4}$ of an hour there, seeing 14+ Lasiurus flying
abound overhead, and then went for dinner at Nelson's.
Spent the evening skinning the deer; an awful job &
a lousy skin. It began to rain about 8 and rained
more or less continuously all night. It wasn't bad in
the tent; able to drain the roof but the water came
in through the screen window and I had a 1 foot
diameter puddle on the floor (under my foot) when I woke
up. Been grounded by Dr. Martini for awhile.

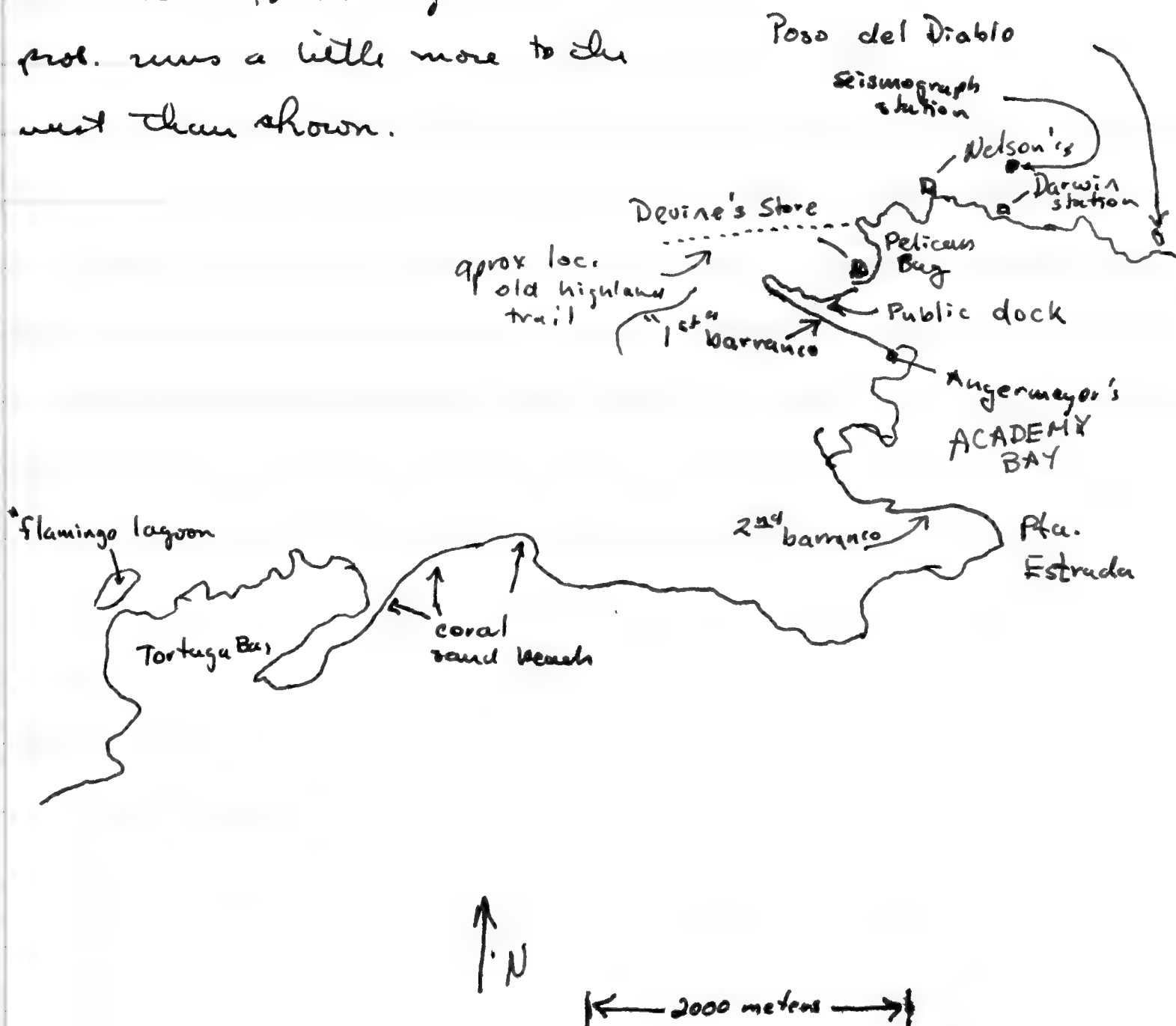
Feb. 9 woke up about 6. Still raining. The rain stopped after
about a chapter of a E. Rice Burroughs novel and I went to
Nelson's for breakfast. Afterwards I returned to the station
and then went out to the seismograph station with
Steve Billeb to get some of the finches we need for the collection.
Saw a dove fly in, but it didn't come close enough to

Feb 9

Academy Bay, Santa Cruz Island, Galapagos.
take. Circled in low then off towards the station. G.
scandens were singing. and saw 3 or 4 family groups.
Got two very worn ♂s and a ♀, both well covered with
Opuntia pollen on the face. One of the ♂s was up in
an Opuntia feeding in the flowers and the other
was down on the ground feeding on a Scaevola cactus pad
and nearby. It had a large green seed, -shaped, ridged,
in its beak when shot; the seed was very soft. The ♀ was
with a group of 2 juveniles, but chased them away when
they approached her. She had a light colored lower mandible,
not unlike the juveniles. The ovary had no really large ova, but
there was one large, yellowish follicle and she had a
dried up brood patch. The males were in good breeding
plumage. Also shot a singing ♂ G. fuliginosa in
transition plumage; its crop was full of palo santo
seeds; The plumage was in much better condition than
any of the scandens but the skin is quite a bit softer. Also
saw 2 ♂ magnirostris, which Steve shot. A number of
Camarkyrus but only one Certhidea singing. At
least 4 Platyspiza singing here and also 2 down by
Nelson's, ~~if~~ if they are coming down from the highlands.
2 Martins playing overhead about 10. Call ~~very~~ ^{not} as Martin
like as I first thought. Spent the late A.M. writing ^{yesterday's} ~~field~~
notes, ate lunch and spent the afternoon skinning. About
7:30 saw a yellow Warbler nest with fairly large young
near the aviary, and little else. Mockers coming to
get the moths in the john by the dome ~~the~~ ^{Ashlock and}

Feb. 9


Academy Bay, Santa Cruz Island, Galapagos.
Cavagnaro got back from all over. Cavagnaro had a beautiful band Dromicus from Duncan which was completely unlike the Nabrough one, and lots of Tro-pidurus and geckos which I didn't see. Bug collector going mad this evening. Traced the following map of the Academy Bay region. Passo del Diablo is the large lagoon beyond which Dr. Miller shot his teal. Most of the Tortuga Bay region is fairly straight forward. We landed near Pta. Estrada and walked along the coast. The old trail to the highlands prob. runs a little more to the west than shown.



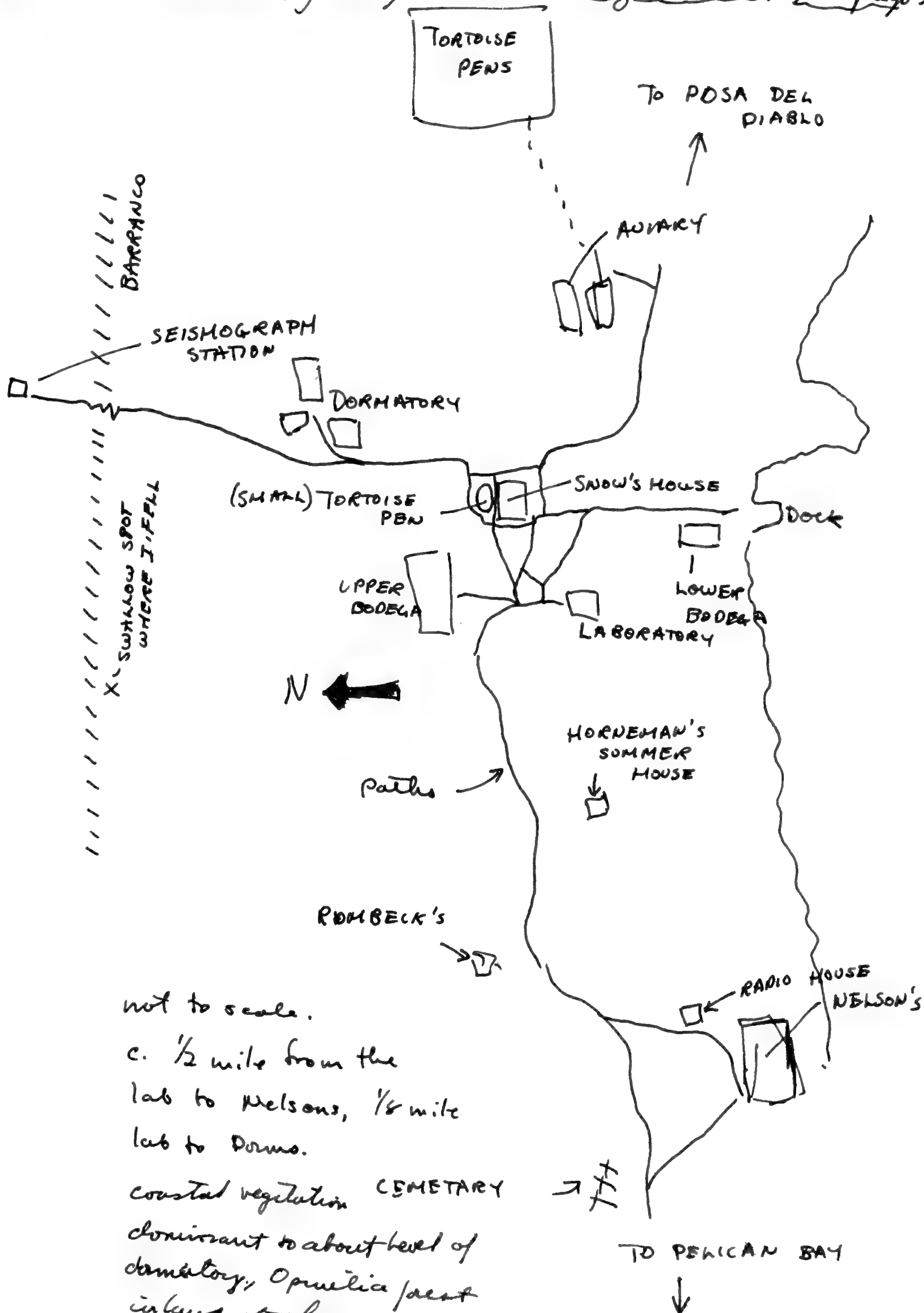
Feb 10

Academy Bay, Santa Cruz Island, Galapagos.
woke up to beautiful clear weather after a fairly respectable rain last evening. Woke up slowly. Have two large blisters on the left side of my neck and a small one on the ~~right~~ ^{right} side, which Dr. Martin punctured. Hurt a lot. They seem to be caused by mashing the abundant small brown cedimeidid beetle which forms large ~~clusters~~ ^{clusters} around the lights at night. All the entomologists are covered with blisters although the critical experiments have yet to be performed. Spent the morning packing for the Wood trip and drying out bird skins. The skeletons are still soaking. Will have to have something done about them! Photographed the baby teal which came in and got a picture of a ♂ Platyspiza on some melons ~~under~~ ^{behind} Snow's house. John Hendrickson and Ross Kiestu came back from ~~the~~ ^{Fernandina}. They found lots of sign of Tortoise but no animal. Brought back lots of Tortoise tracks. Also brought back a Big Dromicus occidentalis and 9 big hand Iguanas, all alive, plus 15⁺ Tropidurus. They also caught 2 mockers and 4 finches (4 species) by noosing them. Saw another form of Dromicus. They said land Iguanas were abundant, about 1 every 30 feet, and that the Tortoise is very, very rare. The soil there is apparently a pumice soil dependant on rainfall to maintain the vegetation. Shortly after this A # of copters took people to the highlands to see Tortoise; Verkonen at the last minute tried to get a ride, was refused, blew up and moved out of the lab. This is about the 4th time he has blown up so far! hates

10 Feb.

Academy Bay, Santa Cruz Island, Galapagos.
in the day Bowman managed to cool him off. In the after-
noon I got my lummy back, thank god! Spent some
time pulling ticks off the Harborough iguanids. The
Tropidurus had 8-10 ticks, most of them very large and
engaged, and about 95% confined to the auricular
and axillary region and with red nits all over, especi-
ally in the back, groin and vertebral region. The ticks were
very similar to those we later pulled from the Conolophus.
The smaller Tropidurus had very few ticks. The land
Iguanas had only ~~4-8~~¹⁻⁸ ticks (which is many fewer
in proportion to the size of the animal) and these mostly
around the vent, singly rather than in the 3's and 4's of
the Conolophus. Saw several bob patterns, which
show some variations around a theme of 2-3 caput
bobs and a bow; sometimes the bobs are given from
a head up, (usually) or head down position, and
occ. a bob was given during the bow and ~~then~~ another
or 2 after the bow. The pattern was something like:
head up head  Carpenter says this is
approximately the reverse of the pattern of the other
Conolophus. In the ^{evening} ~~afternoon~~ went down to ~~Belmont's~~ ^{Reynolds's}
to get chocolate but he was out. Saw about 20-25 bats
here, all apparently the same kind. After dinner there
~~was~~ ^{was} a movie scheduled for town but ~~the power~~ ^{the power} failed so
this was canceled. Wrote notes in the evening; rained
a little and very windy from the west. Will add
a rough map of the Darwin station area ~~in the~~

map of Darwin Station and area.
Feb 10. Academy Bay, Santa Cruz Island, Galapagos.




not to scale.

c. $\frac{1}{2}$ mile from the
lab to Nelsons, $\frac{1}{8}$ mile
lab to Dorns.

coastal vegetation
dominant to about level of
dormitory, Opuntia forest
inland of that.

11 Feb.

Academy Bay, Santa Cruz Island, Galapagos.
after a little rain, only threatened in the A.M. then cleared up. Very rough sea and raining heavily somewhat W of Barrington way out. Birds of all local species singing furiously in the early A.M. but by 5:30-5:45 most had stopped and stayed at a fairly low level for most of the day. Didn't do very much at all today - packed my personal gear for the Pta. Suarez (Hood) trip and got some gear for insect, et al collecting. Verkonnen spent the A.M. trying to pull ticks off the land iguanas Carpenter, Dietline and I cleaned off yesterday; he couldn't understand why he couldn't find any and I didn't have the heart to tell him. Earlier he had demanded that someone help him by going to the pen and carrying the iguanas up for him; no one would do this and Hendrickson spent some time showing him how to do this by himself. Finally Verkonnen got Oites to help him. The Bowman-Billet-Cutler expedition got off to the highlands, Billet doing a good job of complaining - took them 6 hours to get up! Not much doing in the afternoon. Got very hot. A Tropidurus whose territory includes the cage with Carpenter's captives is actively displaying to the cage with little result. The bob parakeet seems to be  or something of this nature and looks to be fairly consistent so far. Most of my battle mark-bandages - were removed today. Shoulder still sore from sunburn and blister beetle. About 5:30

11 Feb.

Academy Bay, Santa Cruz Island, Galapagos
a number of us went into town to buy chocolate etc.
for the Hood trip. They were all out of chocolate,
but had a candy bar which was not a good quality
as the Superior 1 lb. bars they sell (5:50 each).
In the Ecuadorian part of town there were 4-6 hann
fuliginosa flying very close - like - the impression
heightened by their dark color and the footlight -
over the back yards of the houses, scavenging small
bits of food from the chicken coops, etc. They were
silent and showed no aggression though all
seemed to be adults. The feeding flight was some-
what like Ring-bills following a plow, short rise of
20-25 feet and circular, descending glides of 50
to 75 or 100 feet. The tail appears rounded in this
flight pattern and the pale rump is inconspicuous.
A little earlier in the afternoon saw a family
group of Yellow Warblers. The young are greenish above
and white to gray (on the throat and breast) below, with
fairly distinct yellowish wing bars, somewhat reminis-
cent of a dirty D. pennsylvanica and completely unlike
the ~~main~~ North American Townsends. In the evening Bob
Pyle came back down from the highlands with nearly
all the rest of the Pterodroma skeleton; added little
to what he had said before. The bones are about
4" x 6" in size at entrance and he has not probed
the interior. The bones are fresh but clean &
most of one foot is missing. Wrote notes & went to bed

Feb. 11.

Santa Cruz to Barrington Island, Galapagos.
fairly early. Hendrickson got a batch of sea turtle eggs
from H. Rick and after putting aside about 10 cooked
up the rest. However, he couldn't get Snow's stores
going and I never did find out what they taste
like. Leaving for Hood (Española) Tomorrow.

Feb 12.

Very heavy rain about 3 P.M. Later found out
from Peterson that Hendrick cooked up, mumbled
something about Fernandina blowing its top, Ross
(Kister), then realized where he was and went back
to sleep. About 5 got up, got almost everything together
and found that instead of loading at the Station.
everything had to be taken to ~~the~~ ^{Nelson's} deck. Cursed
all my garbage there and we finally got off
about 6:30. Rained a little in the A.M., then stayed
windy, and finally cleared up, but the trip out
was extremely rough, especially in the stretch from
Santa Cruz to Barrington. Saw very little in this
stretch, the most notable being an Albatross (Leward)
just out (1 hr) of H. Coelemy. Scattered Storm Petrels,
mostly O. gracilis with a few O. leucogaster, but ~~prob~~ only
about 1/5^{bird} minutes on the whole crossing. Even fewer
Audubon Shearwaters and Masked Boobies plus a couple
of Frigatebirds. Barrington appears to be a small low,
well worn island from the distance; we were too far off to
tell much more about the island. Beyond Barrington it
cleared up quite a bit, sunny but still rough.
About 1/3 of the 18 going are sick. Birds even less

Feb 12

Barrington to Punta Suarez, Hood Is., Galapagos.
numerous from Barrington to Hood, the same
species involved, in about = numbers. Slept a
lot during this stretch. Saw one nice Red-billed
Tropic-bird in this stretch flying over the boat to-
wards Hood about 3 hours out. From a great
distance Hood looks much like Barrington,
a low, smallish island dominated by but 2 or 3
low cinder cones. As we approached the area where
we will camp, Pta. Suarez, became distinct as a
low shelf at one ^(the E) end of the end of the island. At
first the vegetation appears to be dense and dull
green, but on closer approach it was obvious that this
was lichen covered, barren low trees with scattered
green bushes in between. The Islands proper gives
me the impression of being covered with dead "soft
chapparal." The Pt. is covered with a well grazed,
dry vine, mixed with mesquite and giving
me the impression of a thicket of thornless roses. The
soil along the shore is quite white from booby guano,
but inland the soil is quite reddish, the rocks a blackish
red, and due to the lack of vegetation, this soil is very conspicuous.
Even from the patrol boat, 400 yards out, could see doves
flying along shore and lots of boobies. Saw the Mockers
almost immediately. They were running about the camp,
eating our bread (probing), running about on the tables,
on the ground. etc. They are as tame now as the Fernandina
Mockers were after 4 days, and twice as common.

Feb 12. Punta Suarez, Espanola (Hood) Island, Galapagos.
out in the brush sow on thursdays vigorously and as
powerfully and efficiently as a Calif. Thrasher.
Didn't see much other foraging, but lots of vocali-
zation, much like the Santa Cruz birds but possibly
a little throatier. One bird in camp has no tail.
Two species of Geospiza around the camp area,
? fuliginosa and conirostris in about a 2:1 ratio
in favor of conirostris. The latter is a large, laterally
compressed-billed bird, which feeds very close to the
ground (there is little alternation) for the most part.
Bills dark but almost no singing. The other finch
is long, sharp beaked \Rightarrow like the ~~Marooned~~ ^{Fringing} Is.
fuliginosa. The latter is not too small, about the size of
Academy Bay birds, while the former is about the size,
bill and body, of a large fortis. Probably correlating
with the lack of ~~the groves~~ ^{the groves}, ~~Yellow~~ Warblers are not to
be found here and Certhidea is common everywhere.
It is paler, greyer on the back with almost no buff
on the breast; songs very like Santa Cruz birds. They
Forage close to the shore in quite low (2 ft high) very
close to the shore. I wonder how much the scarcity of
Certhidea in the lowlands of Santa Cruz is due to ~~the~~
failure to compete with Dendroica, which is most
successful where it takes hold. The Tropidurus
here is very strikingly unlike any I have ever seen
before. It is a large animal, quite reddish (about
~~the~~ the back); very much the same reddish color as

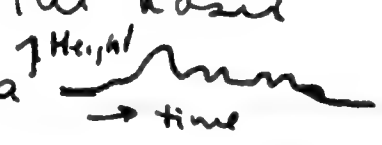
DeBenedictis
1964

(102)

Feb. 12.

Punta Saavedra, Isabela (Hood) Island, Galapagos.
The soil. The bob pattern is very simple and much
more like the Fernandina form than the Santa Cruz
one. They are not as common at first appearance as the
latter two forms, however. ~~Several~~ ^{Many} young (3-5) animals
about. When we landed there were several frigate
birds circling about, all of which appeared to be
magnificens. Later when Bob Pyle and I walked
about the Pt. we saw at least 1 juv and 1 minor,
the juveniles clearly showing rust color. We walked
around the Pt., then cut back to the camp. The
N side of the Pt is low, mostly cobble stone beach with
a few stretches of sand. No nesting seabirds here
(except a very tame pair of Oystercatchers) but
fair #s of sea lions. The S side of the pt. gradually
rises to a 3-400 ft high cliff; A strip of bare ground,
widest about due south of the camp, surrounds the
coast, and the scrubby vegetation described above lies
between the two coastal strips. Beginning almost at the
Pt. Masked Boobies are nesting in a strip 1 to 10
meters wide on the flat along the shore, extending
about a 1/2 mile E from the Pt. In side this strip, ~~extending~~
from the open areas into the well vegetated areas
is a dense colony of Blue-footed Boobies, which E of
the Masked Boobies spills down ~~on~~ ^{onto} the cliff.
The Masked Boobies show a considerable variation
in the reproductive cycle, although most have
eggs and newly hatched young. Saw a few young

12 Feb

Punta Suarez, Espanola (Hood) Is., Galapagos
birds strong enough to lift their heads and 2 or 3 about
 $\frac{1}{2}$ grown birds. All the eggs seem to be well along,
and several nests had 1 egg + 1 young bird inside.
The nest "is just a scrape in the gravel between the
boulders, much like that of the Blue-foots. The
Blue-foots on the cliffs seemed to have no young,
but on the ~~land~~ ^{flats} there were numerous $\frac{3}{4}$ to
flying (but unfledged) young birds, which the adults
cheerfully noisily. The feet of the adults are the
deep blue of the Santa Cruz Birds. The ^{iris} ~~eye~~ of the
Masked Booby is a golden-yellow, while the iris
of the Blue-foot is a pale creamy color. Marine Iguanas
are fairly numerous, but not as concentrated as at
Pt. Espinosa all along this stretch. The σ s are
fantastically colored beasts, blackish brown
overlaid with a clear deep red and turquoise
on the legs and vertebral region. The f s are much
duller. No signs of nesting. Much bobbing by
the males, which show about the equivalent
variation of the Espinosa animals. The basic
pattern appears to be to be roughly a ^{7 Hz, 1st}  _{time}
and is often repeated several times in sequence. The
principle variation seems to be in whether a double,
single, or triple bob will occur at any one stage. The
iguanas seemed to be most common where the cliff
was low, or where there were shelves in the cliff but
I saw several on the very ~~steep~~ steep cliff hanging from

Feb. 12

Punta Suarez, Española (Hooel) Is., Galapagos.
Small ledges 200 ft from the water. Tide high when I was out. (Clouded up in the evening, moderate wind). About $\frac{1}{8}$ mile from the Pt on the S side the 1st Forked Tailed gulls were to be seen. and these became increasingly common until they were the commonest bird on the cliff (next Blue-footed Booby) at the really steep cliff. Nest on ledges from above the spray line to the very top of the cliff. Most of the nests I found contained one buffy, speckled egg, but saw 2 fledged young birds, one which could and did fly, and one which was in the same plumage but didn't fly. The young is more spotted than a Yermin above ^{and} ~~but~~ differs in the same way the adult does, the smaller black triangle on the primaries. It has a suggestion of a dark collar and a prominent black spot above and ~~below~~ ^{below} the back of the eye. The adults (and young) are very large billed, this especially apparent when they cull, and the red eye ring is quite conspicuous. The white notes are not unlike those of other gulls but it has three rattle notes, whose ~~analogy~~ ^{analogy} I know only the beginning of the ~~long~~ call of L. fuliginosa. The rattle and whistle can occur at the same time. The culling posture seem to be a high and a very high oblique, with the carpal out. little sign of any other postures. Far out, where the cliff was very high groups of 6-8 Tropic birds could be seen chasing one

Feb 12 Punta Suarez, Española (Hood) Island, Galapagos
another along the cliff face, uttering a tin-like
"kree-ree-ree-ree" call. A few flew over land and
saw one place on the cliff visited by adults twice.
A few adults look but. late in the evening
(7:30 on) Audubon shearwaters appeared and
flew into the cracks in the cliff; soaring about in
circles over the ocean in groups of 5-10, as in
Academy Bay, before going into the cliff. No other
procellariiform birds seen, but picked up a com-
plete Albatross skull from a few other disarticulated
bones. The commonest ^{land} bird on the point seems to be
the Dove. (followed by ^{Mocker} Cuthrichs, the G. conirostris,
the G. fuliginosa). They are evidently nesting in the
rocks; flushed one bird out but couldn't find
the nest. Saw one walking after another in a
hunched position, tail?, wing?, and the body feathers
raised.



the bird being displayed to walk
away and showed no special posture. Two other
doves showed repeated attempts to mount each other,
(as far as I could be sure), one, then the other flying-jumping,
with open wings and fanned tail on top of the other
bird. This would go on for 5+ seconds, then they would
separate, and bow to each other (usually) or one
to the other, the wings out and slightly dropped and
the upper tail coverts raised, alternating position
as shown on the next page:

DeBenedictis,
1964

(108)

Feb. 12

Punta Saurey, Espanola (Hood) Island, Galapagos.



the head orientated toward the other bird. bouts of bobbing lasted shorter long or slightly longer than the mounting. These doves have a very conspicuous pale mark extending down and back from the eye which I have not noticed on other birds. Far out from the Pt. we found a pair of Hawks (Butes) but no sign of a nest. Walking back to the camp with Rick and Allen Cox, caught a Proinca in a ~~open~~ spot in the bush, which Cox spotted. The snake was on the soft soil, between two overhanging rocks and not moving when I caught it, about 5:30 P.M. About 6 Carpenters caught another about the same size in some denser vegetation 50 ft from camp. Earlier in the afternoon Dr. Bartholomew pointed out a large spotted sea lion with a shorter, blunter snout than the rest of the local sea lions, an unusual golden yellow. He said it was the mainland species, ~~but~~ we lost it in the surf before it could be photographed. Saw half a dozen to a dozen 12+ ~~gray~~ ^{gray} Pale bellied porpoise from the Patrol boat on the way in, about 2 hrs out of Hood. In the evening we heard, and saw, until well after dark, Fork-tailed gulls flying, as from the cliffs. Saw 2 imm. Night Herons but no Green

12 Feb.

Punta Saucay, Española (Hood) Island, Galapagos.
Heons along the shore. One was very brown and
worn, hardly showing the light speckles; when I
chased it away it flushed a small ^{red} crab which it
caught and ate. The other Heon was the same
^{dark} color as the Fernandina juveniles. Saw no adults.
Heard one in the evening. Heard lots of Boobies
and 1 Mockers (very briefly) during the night
while finishing my notes. A very full day. Goats
fairly common. Ted Papenfuss shot 5 and I even managed
to see a smallish brown one and heard several others.

13 Feb.

wake up sometime after sunlight. Culhides and
the Geospiza and mockers are singing quite a bit, the
Geospiza soon almost completely quitting. Noises from
the boobies fairly conspicuous but not overpowering.
Close at hand heard only Blue feet. Very little sign of
Swallow-tailed Gulls. After breakfast went out to shoot some
finches, but my skates, went very bad, got 4 birds with 15
shots (pistol) and hit 2 with stones, only able to retrieve one.
I took only Geospiza taking a ♂ fuliginosa from in a
mesquite bush. Most of the fuliginosa I saw were in the bushes
2-4 ft from the ground, and the stomach of this bird was full
of seeds of this plant and (Cordia) buds, and very much
sand granules (1 1/2 mm. in diameter). My initial impression
that this species in in the bushes much more than conirostris, but
this may be due to the ratio of the two species, more like 1
fuliginosa for every 6-8 conirostris. The species is singing
a little, the song fairly high pitched, like on Santa Cruz, which

1964

(105)

13 Feb.

Punta Suarez, Española (Hood) Island, Galapagos
 I would transcribe as: ^{che} ~~wew~~ ^{wew} about $3\frac{1}{2} \pm \frac{1}{8}$ sec long.
 The (f's) are very spotted and look like young birds. Little
 signs of ^{body molt} ~~wet~~ on the bird I skinned. B. conirostris is some-
 what more common than I suspected, but far rarer
 than the finches at Academy Bay (c. = to the fuliginosa
 pop. alone). In the morning I heard two songs and
 later heard one male give both in succession. The
 short song is given at a slightly higher pitch than
 the long song, but both are much deeper than fuliginosa.
 The short song may be transcribed ^{che} ~~wew~~ ^{wew}, about $\frac{1}{2}$ a
 second long. The long song is very buzzy, with much the
 same quality of the song of Platyspiza and may be trans-
 scribed as ^{chiwurrmm}, about 1 second long. The species also
 has a high pitched whistle, seeeeee, like the other finches
 but I hear it infrequently. The note is a chirp, like
 a Golden-crown sparrow as I recall. A few of the birds
 I saw later were in trees, and they forage in the low
 mesquites. They usually sing 2'-6' from the ground but
 the ♂ I took was ^{singing} on the ground, and I saw 2 or 3 other ♂'s
 singing from the ground. By far the greatest amount of foraging
 takes place on the ground. Much of this is in the normal hop
 and jump style but they also have a most unique method
 of feeding. They wedge the bird in to a crevice, either between
 two large level rocks, or under a small lava rock, or at the base of
 a bush. When the bird is wedged in to the crevice, the bird kicks
 vigorously with its feet, as best as I can tell first with one then
 with both together as if it were running with ^{gracing} ~~the bird~~ the bird,

De Benedictis: Tex
1964

(109)

12 Feb.

Punta Suarez, Espanola (Hood) Island, Galapagos
a more exact analogy being pushing a heavy object with one's feet, bracing the push with one's shoulder. Mostly the birds I saw were working soft soil or the humus at the base of the bush, but one ♂ I saw was at least 4 inches down when I scared it away trying to see exactly what it was doing, and I saw several birds 2-3 inches down. Birds may work the same spot for 1-2 minutes after I find them and then wait on. The one ♀ (# 315) I shot while ^{short while it was} ~~it~~ digging contained much ^{sand} ~~grass~~ and a few small green seeds of (? Cordia) buds. Dr. Bartholomew said he saw this as well, the birds overturning ~~the~~ ^{rocks} the size of the bird. The compressed bill of the species seems well adapted for this sewing as a heavy wedge almost like the long bill of any ^{oyster} ~~clay~~ catcher. The jaw musculature does not impress me as being nearly as heavy as magnirostris although the bill is comparably deep; the structure is much more like fortis. Notwithstanding, the ~~crop~~ ^{crop} and gullet contained the same soft seeds of mesquite (mostly) and (? Cordia) buds, as well as much grass. Most had a lot of fat near the vent, on the throat (below) and in the axilla, the fat being quite yellow and requiring a little scraping to remove (the fattest finches I have yet handled). All have very worn bills and some signs of wing molt. One I hit with a rock ^{lost} ~~saw~~ almost all the ^{primary} ~~feather~~ from the opposite wing. One of the ♀s had at least 2 ova on the right side, as marked on the label plus a good left ovary 6-7 mm. long. The birds sang only sporadically during the midday and late afternoon. Mockingbirds

Feb. 13

Punta Suarez, Española (Hood) Island, Galapagos
are all over the place and make quite a bit of noise
as they walk about. They much prefer to walk but do
fly a little. They wander up to me, pick something up from
the ground, look at me, wander closer, feed & and look
again, walk past, just at a safe distance, and then
disappear into the bushes. Most birds I see are staring
at me, but a few are seen foraging. Mostly they walk,
stare and peck, but they thrash effectively and efficiently,
throwing small debris 8" to 10" into the air and as far to
the side. Thrashing occurs mostly under dense bushes but
I saw it clearly at least 3 times today and heard
what was probably thrashing elsewhere. Dr. Bartholomew
saw one ^{bird} ~~catch~~ 6" Tropidurus and R. Tony Peterson saw
one kill a young Masked Booby. I found one fresh,
complete empty nest in a dense (Cordia) bush about
4' from the ground, and 3' from the top of the bush, off to
one side in the densest part of the bush. Structurally the
nest was of coarse sticks with a fine bark or grass lining,
about 15 inches in diameter, much like the nest of a
Song Sparrow. Also saw an old nest a little lower to
the ground and in a now dead bush. Saw markers remaining
the grass or straw from an old Coccyzus nest, which are
quite widely distributed in the denser bushes. Saw one
Dromicurus about the same size as the one I caught yesterday,
about 10 A.M., but missed it in the tangle of twigs and
leaves in which it was crawling. Tropidurus fairly
common. Young to 5" long total length. Saw two ♂s facing

P. De Benedictis
1964

(71)



Feb 13



Punta Suarez, Espanola (Hood) Island, Galapagos
off and bobbing right by my cot. My watch, which has
been full of salt spray for the last 2 or so days finally froze up
(8 A.M.). Spent the mid day (11-3) skinning my birds and
eating lunch, then went out towards the cliff to look
at sea birds, until about 4:30. Most of my ^{young} ~~last~~ bird
observations are included above. Saw an upwing lit
posture (one) with bill up & carpal ~~out~~. The bird display-
ed to fled. Saw one head low (? low oblique) posture
with the tongue distinctly raised, and lots of calling
from obliques. Didn't do much serious watching.
Some suggestion of flight displays (? V-flying?). Actually
very little display pattern except obliques but lots of flights
to and from perches. Didn't see any juvenile birds
today. In the morning I found a $\frac{1}{8}$ grown Albatross
wandering clumsily around in the bushes about $\frac{1}{2}$
way across the pt from the cliff. It moves the head from
side to side in alternation to the foot off the ground and
didn't try to flap the wings when I got near. Almost
uniformly brown, apparently downy, and certainly less
than a month from fledging. Spent much time watching
Red-bellied Tropicbirds zooming around. Twice saw
birds flying over the pt. to the N, both times single birds.
They have one ~~char~~ display flight, in which the call
I described yesterday, more accurately transcribed as
"preee^e kree kree kree....." (3-6 "kree's"), high-pitched, much like
the rough "kree" of Forster's tern. This call is given
only from this flight posture as far as I can tell. The

Feb 13

Pinker Scaup, Española (Wood) Island, Galapagos,
calling circles about in the normal shallow, loose
wing beat flight with 2 to 6 other birds, then glides
with the wings up at a 30° angle and the bill slightly
opened and pointed downward.



In a normal flight (or glide) the bill points forward, and
in a normal glide the wings are held below the
horizontal . Saw no other clearly
ritualized patterns. Heard the shorter "Kreck" call
~~the~~ heard on ~~on the~~ ^{the} "Golden Bear" off Mexico, but uncertain
of the circumstances. Have seen 2 birds in a group
of 4 displaying as such ~~at~~ ^{up} once, but most birds do
not display when one does. Watched one bird flying
about the cliffs for about 5 minutes. When I first saw
it it was making repeated passes, alone, at 2 spots
on the cliff, one a horizontal crevice in which I could see
at least 1 Tropicbird, and another spot about 30 ~~feet~~ ^{yards}
away where there were several crevices which I couldn't
see in to. The bird would fly up to the cliff, rise ~~to~~ ^{vertically}
to about 45° and brake with the wings as if to stop moving
, then go back to horizontal and circle out 2-400 yards
return and go through the same procedure again. It
continued like this for 2-3 minutes then joined a group
of 3, later 5, other Tropicbirds and circled out much
further, ^{to} a $\frac{1}{4}$ mile or so, and at least twice gave the

Feb. 13 Punta Suarez, Española (Hood) Island, Galapagos.
wing up glide + call described above (One other bird
in the group also did so). Aft 2nd minutes of this,
it returned to the cliff and after spending a minute
making 2 or 3 rather half hearted passes at the cliff
flew far out to sea to the SW. My impression of the
braking movement was an attempt to land foiled
by the heavy wind along the cliff, but the repeated &
persistent passes are like those of a White-thr. Swift
at a nesting colony and may be of some deeper
significance than just attempted landings. Never
saw a bird land but pretty sure I saw a couple
just after they left the cliff. The Blue footed Boobies
have a greater size range of young than I ^{1st} thought,
going down to $\frac{5}{8}$ grown young. Saw a $\frac{5}{8}$ & a $\frac{3}{4}$ grown
young in the same nest. The adults have two eye
sizes, one having a wide iris and small pupil (whistlers) -  - the other having a wide pupil
and small iris (grunts) - : A slight difference in size,
the grunts being a little larger, especially in the bill, than
the whistlers. Presume this is a sexual difference. Must
check a little more on this and on the leg color of pairs
noted by Bob Pyle (says one of a pair has darker legs).
Carpenter says the Iguanas are highly territorial
now and territories well established. The local pair
of Oystercatchers were quite vocal as late as 8:30.
Didn't hear as much noise of gulls this night as last.
Heard goats a couple of times during the day, but

De Benedictis
1967

(114)

13
Feb. ~~13~~

Punta Suarez, Española (Hood) Island, Galapagos.
didn't see any. From about 4 on the Audubon
Sleazewaters came in to the cliffs, in small groups
as yesterday. Tropicbirds active at least to 4:30.
They never feed near the cliff. Noted a few Brown
Pelicans about, and saw an Adult Night Heron
near the camp. The Frigatebirds are a puzzle to me.
The ♂s show a faint brown bar on the greater secondary
~~coverts~~, very narrow and hard to see. One showed
a purplish sheen to the axillary region. The young
seem to have rusty about the head. White-throated,
clear, white breasted birds are frequent. Haven't seen
one well ^{enough} ~~enough~~ to check the eye ring. Ortiz &
T. Pappas went to the highest Peak on the Island
today. to look for Tortoise. They saw none, nor signs of
it or Land Iguanae, but got live land snail and two
snakes. They saw ~~several~~ ^{many} Flycatchers, Ted describing
Pyrocephalus and Ortiz Myiarchus which I have
not seen locally and both they and Kopf have seen
Short-eared Owls. Planning a trip to Gardner on
Sunday (whenever that is). Cool in the A.M., hot at
midday, clouded up in the late afternoon. Very windy
at midday but not so bad earlier or later. Flies
very bad in the evening. Flies and blister-beetles
(already one case on me) come to the kitchen but
not as many moths (in proportion) as at Academy
Bay. Makes it very annoying work to write notes.


Feb 14

Punta Suarez, Española (Hood) Island, Galapagos.
woke up about sunset - lots of mocker and Certhidea
song, little finch song. Not much doing. Shortly after
breakfast, I took Ortiz as a helper and set up a single
strand 30 foot black mist net in the heavy bush east of
camp. The net was at the end of an open red soil-lava
area running N-S from the cliff, surrounded to the ~~W~~^{E, S, &}
W by bush. As we were setting the net up 3 or 4 Neomimus
came over to see what was going on and quickly learned
to run under the net (without getting caught).
After this was done I wandered about along the cliff and
into the ~~main~~ Booby colonies and took a number
of photographs of scenery and various of the local
animals. About 9:30 I saw a Dromicus about the
size the one I caught but missed it when it escaped
under some lava at the base of a dead bush. After the
first check an hour or so after I set up the net, I
discovered a small Neomimus hanging from the 2nd
tier, very quietly, and removed it and dispatched it.
I took it back to camp, had some lemonade and
then went back out along the cliff, and spent some time
watching feeding finches and Neomimus. There were only
1 or 2 Tropicbirds around the cliff, but lots of fork tailed
gulls. I spotted 2 young birds sitting on a ledge on one of
the accessible ledges and went down to see if they
would fly. There were a # of Crotophaga nests with
eggs along here, and the adults wheeled and
rattled loudly as I approached but none tried to


Feb 14

Punta Suarez, Espanola (Hood) Island, Galapagos.
hit me. The ledge with the two young also contained
2 eggs. The young had fully developed flight feathers
and looked as if they could fly, but I may have frightened
them into the ~~the~~ ^{small} depression they were sitting in for
I was able to catch one with little difficulty. The
adults were frightened from the ledge when I
approached but didn't bother me at all when I
had the young bird in hand; by the time I had
killed the young & climbed to the cliff top all
the adults and the remaining young returned to
the former position it had occupied. Very little
aggression in the colony but occasionally one bird
threatens ~~separates~~ ^{separates} either with a forward posture
(of Tinbergen) or with a low oblique with the bill
open and calling. I checked the net to find another
worker low in the net (2nd tier also); I had just
flown in when I approached. I got mad at the
birds running under the net and ~~moved~~ ^{with rocks} got
the bottom tier on the ground. On the way back to
camp I saw 2 nice billy goats, one brown, one brown
with a white body (earlier Ortiz and I saw about 8
goats along the edge of the Blue-footed Booby colony. I ate
lunch and then skinned the Creagrus. After this I
went to check the net finding 2 Arctides, one
in the middle, one near the ground at one corner,
tangled up plus a Geospiza fuliginosa ♂ and a
♂ Tropidurus well tangled up. As I was untangling

Feb 14

Punta Suarez, Espanola (Hood) Island, Galapagos
this morn, one of a pair of very excited Cuthicidae, which
were near the net, flew in and another Tropidurus
got entangled in the lower tier. I managed to get
everything out and when I got back to camp I caught
a Dromicus going under the box with the stone on.
Spent the rest of the evening skinning the mockers,
which had already badly attracted flies (removed
as many of the eggs as I could). One bird near the
net I followed for some time. It walked a long,
moving 1 to 3 feet at a time, then stopped, looked
down, and would flip pebbles aside with 2 or 3
side to side movements of the bill (or much less often)
merely pick up something from the ground. It was
quite successful, and captured several small beetles.
Once time it moved a 150[±] gm. rock on a pivot
about 2 inches . The accomplishments of the conirostris
are even more marked, however. A ♀ plumaged bird with
a light bill I watched turned over a ²⁰⁰ gm. rock
which seemed to be resting flat on the ground; the
rock was somewhat spherical but still must have
required some effort to overturn. It kicked a 36 gm
rock about 2" away, 3/4" off the ground at the highest.
It seemed to be taking ~~the~~ ^{grass} stems which were covered
with gravel. Another bird I saw looked like it had
the root ~~with~~ ^{on the} base of a grass stalk. It had much too
trouble with this, ~~the~~ ^{maneuvering} the stem with the tarsi
and at the angle of the tarsi, and holding the

Feb 14 Punta Suarez, Esperanza (Hood) Island, Galapagos.
object against a rock on the ground. It took about
a minute and a half to ~~produce~~^{produce} an edible husk.
A male conirostris I watched easily kicked up ~~an~~
20.5 gm. rock. Many small rocks it picked up with
the bill and threw aside (one such rock weighed
13 1/2 gms). The habit of picking up rocks may perhaps
be something of the origin of foot using. It had
dug a hole 1" deep, 2" in diameter when it tried
at this spot. I saw one fuliginosa attempt to feed
in this manner but it was not too successful and
gave up after about 30 seconds. Took a poor picture
of a "♀" conirostris in the act. Also I saw a
mocker with the tail end of a Tropidurus hanging
out of its mouth. I ran over to get the lizard but
the mocker had already swallowed it. I would
guess the lizard was about 5" long. A 8" ♀
on a rock near where a mocker was feeding kept
an eye on the mocker, but ~~was~~^{was} not bothered and
did not move because of the mocker, which eventually
~~moved~~^{moved} away. Before dinner Ortiz and I dis-
mantled the net, which had taken nothing else.
I think the mockers knew what was going on for
they ran under it as soon as I got it off the ground. There
were 2 other pairs in the area of the net in addition
to the birds I took. One bird I was watching, fed,
stopped, called a soft "tir-ruck-tir-ruck" several
times raising the ~~ground~~^{wings} above the back and tail


Feb 14 Punta Suarez, Espanola (Hood) Island, Galapagos
tail up, and then flew off to join a bird calling
loudly to chase away another pair. On the way
back from removing the net Ortiz and I saw 2
adult night herons crabbing about under the bush
about 30 yards from the water. One raised the
crest very high, and the gave a soft call like the
flight call. crest erected looked like .

Spent the evening skinning out the small birds by
lantern light, and finished about 10:30. Never
again. In the evening we saw numerous doves
flying from the center of the island to the rocks on
the very end of Pta. Suarez. In the A.M. we see
fairly heavy flights in the reverse direction. ^{4:30}
suspect this is ~~for~~ the water Papenfuss + Ortiz
found in the higher parts of the island. Clark Koford
gave me an Albatross skull; didn't see the young
bird today but didn't look very hard. When I
checked the net the 3rd time there was a single
Myiarchus magister, silent, near the nest.
The mouth lining looked pink. I couldn't lure
it into the net crashing about in the bush and
2 workers eventually chased it away. Heard gulls
flying out in the evening and the oystercatchers at
night. we are planning to go to the east end of
the island tomorrow. ~~The past has been~~

DeBenedictis
1964

(120)

Feb 15

Punta Suarez to Punta Cevallos, Española (Hood) Island, Galapagos
woke up c. 6 A.M. and went to the tent to wrap the
finches I skinned yesterday. I went out in the bush
to empty my bladder and on the way back I picked
up a very cool dove which couldn't fly. It was injured
in the heart and it soon died according to Dr.
Bartholomew, to whom I gave the bird (alive). After
breakfast (very rapid) we boarded Miguel Castro's
fishing boat with Iotharo, his assistant, Carpenter,
Koford, Bartholomew, Peterson, Ortey (and myself)
having Arnadon alone in camp (he banged up
his leg and has been taking it easy). The ~~road~~^{trip} to
the east end of the island was uneventful, there
being few birds (Boobies and Frigatebirds) and
the terrain much like the Pt. most of the way -
a cobblestone beach, with sand (in places) above &
then dense bush. The top of the island is a (cleared)
Palo Santo forest, fairly open. Towards the east end
(N side) of the island there ~~is a little low cliff~~^{is a little low cliff}
with much guano, little birds (Coccyzus & Sula nebouxi)
and beyond this a long sand-rock beach like at the Pt.
Two small Islands off Hood between it and Gardner,
as well as Gardner and the east end of Hood have
quite a # of Opuntia which grow in a P form, very
dense on top. The west most of the two small
islands is in profile N  S and on the steep,
reddish N cliff, 200[±] ft high (island $1\frac{1}{4} \times \frac{3}{16}$
miles in size, longer than wide) there were about 30

P. DeBenedictis
1964

(121)

Feb 15

Punta Cevallos, Espanola (Hood) Island, Galapagos.
pairs of Craagus and 10 pairs of Sula nebulosus.
The vegetation ^{on top} ~~land~~ was quite dense but as dry as on
Pta. Suarez. The 2nd island was a little lower, c. $\frac{1}{8}$
mile square, but only 2-3 pairs of Craagus on the
cliff. The vegetation was much the same here. We
went past here to Pta. Cevallos at the extreme E end
of Espanola where we landed on a rocky pt much
like the extreme pt. at Suarez. The intertidal here
was quite rich, with much algae and lots of
coral (picked up 5+6 bright orange corals growing
together on the bottom of a rock). Marine Iguanas
are almost none exist here for some reason
although the situation looks perfect. Perhaps the
good algal growth + lack of iguanas go together.
Certainly it was the best tidal area I have seen
in the islands. On the beach there was a young
albatross a good month from flying (down on the
head + neck + much of the body) which I photographed.
The pt consists of a sandy beach, low (2 ft high) open
brush in which we saw, in order of abundance,
Nesomimus, G. conirostris, G. fuliginosa, Neopelma, and
Certhidea. Tropidurus, like the animals at Suarez,
were very common here, but I saw no snakes. I
walked along the shore, which quickly developed
into cliff, 1st 100-150', then 200-300' high, of
bare rock. Masked Boobies were very conspicuous
here, nesting in large #s and at about the same

Feb 15

Punta Cevascos, Espanola (Hood) Island, Galapagos.
stage in the cycle as the Pta Suarez birds (eggs to
1/4 grown young, mostly near hatching, [either side]).
In #s it was exceeded only by Creagrus which was
even commoner than at Pt. Suarez. Nests with eggs
were everywhere; I walked up to one bird in a brooding
position (belly on ground, carpal out, breast feathers
erected) which did not move until I touched it
with my foot; its nest was empty. We saw 3 Nes-
seimus eat the egg contents of a Creagrus nest (1
egg), this obtained by poking a hole in the end of
the egg & (drinking) the contents. Missed a picture
of this. (damn!). The mockers twice followed me
into the colony, hoping for eggs, but didn't have
any luck; Boobies eyed them carefully and won't
get off the nest for anything. Some of these nests
contain very small eggs. The brush comes close to the
Pt. at one spot, then opens to a wide area with a
hill (where the cliff becomes much higher).
From the brush area to the NW there were many
signs of albatross (feathers, bones), and Keith said
he had banded c. 300 here (vs. 1300 at Pt. Suarez).
There were almost no Blue-footed Boobies here at all,
just one scattered pair on the high south cliff.
Red-billed Tropicbirds were the 3rd commonest seabird
here, buzzing along the cliff but didn't see any land.
The next commonest species seemed to be Greater
Frigate bird. We found 4 ♂s on the cliff in clumps


Feb 15


Punta ~~Espanola~~ ^{Cevallos} Espanola (Hood) ~~Island~~, Galapagos.
of ~~some~~ ^{small} succulent (no nest), with the gular sacs
inflated and got good pictures. The birds show a
clear green sheen, but the brown bar on the wing is
not very distinct. Eye ring dark. Saw a ♀, dark-
throated, with a red eyering, and the young have a
very dull red eyering, some show no nest color at
all but they all seem to have a darkish pectoral
band incomplete on the mid belly. Their feet are
grey and the bill pale grey. The ♂s seem to have
grey feet (not positive these are minor) but some
have a plumage like ♀ magnificans, with inflated
gular sacs in this plumage. Birds at Suarez with
black throats and clear white bellies have dull feet
feet, and ~~seem~~ ^{it is} not unusual to see molting birds
with black heads & mottled bellies. This plumage
may be distinctive to minor but is hard to tell
from magnificans. A ♂ I saw at Suarez yesterday
had purplish axillaries, not sure of the birds. Did not
see any signs of active Frigatebird nests. Near where
the albatross was there was a pair of Oystercatchers
not as tame as at Suarez, and I saw my 1st Green
Heron for Hood. (Blue footed Boobies were less common
than frigate birds to complete the order of abundance
of water birds; saw no other species here. Geospiza
conirostris here has the same rock turning habit
as at Suarez and saw 2 birds perform quite well,
picking up a couple of the large rocks & throwing them

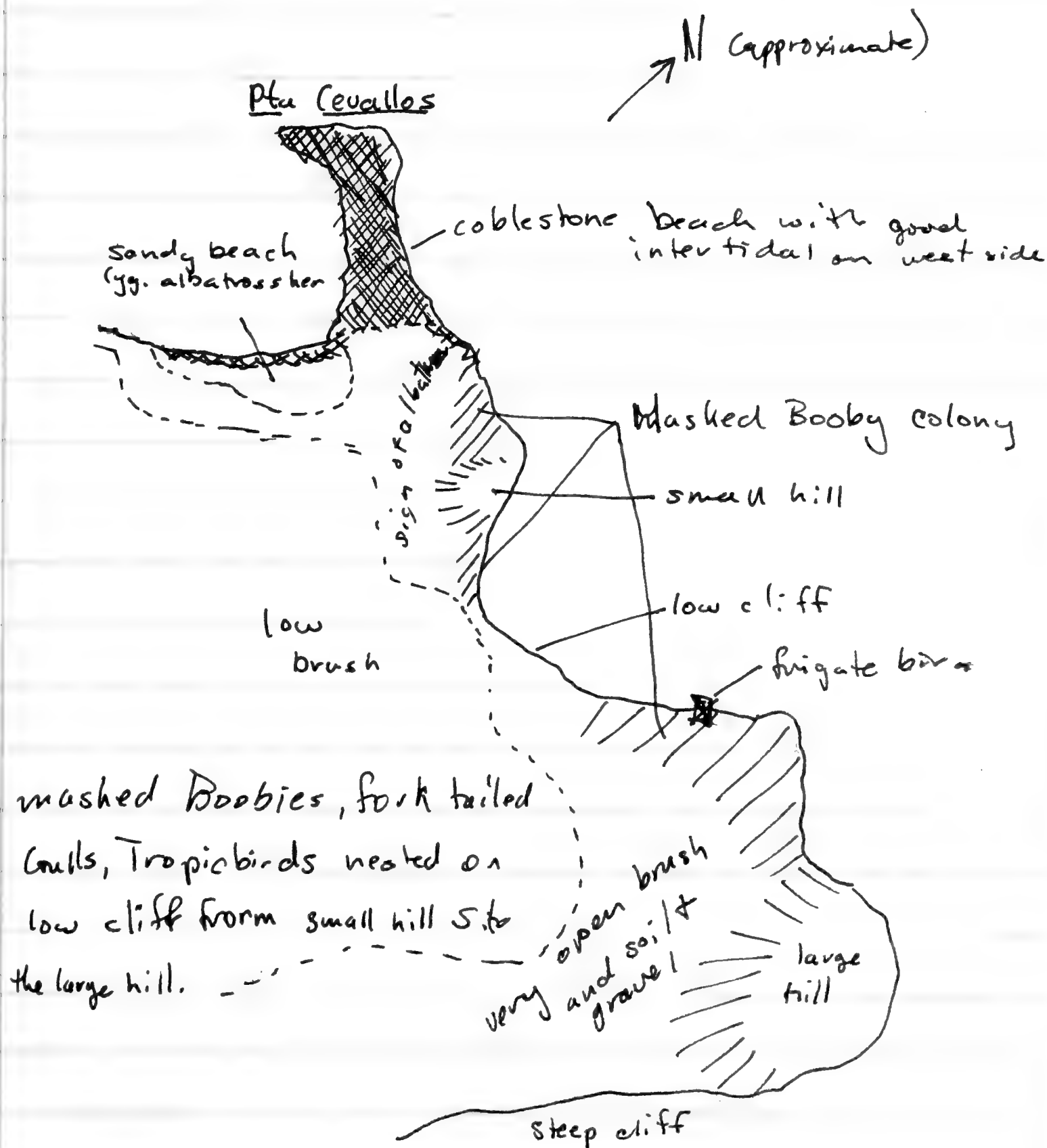
Feb 15

Punta Cevallos, Española (Hood) Island, Galapagos.

managed to move. One bird working in a gravel area dug a pit 2" deep, 3" long, & 2" wide moving several fair sized stones. The largest (111 gm.)

-shaped was on a small mound, and the bird rolled it off with ~~no~~ ^{no} trouble (1/2" above the resting spot, & then kicked away all the gravel of the mound. There was considerable seed and grass stems under the gravel, and I could see the bird ^{taking} ~~working~~ what seemed to be the base of grass stalks. The action of this bird was easy to see. It placed the base of the bird ^{against} the edge of the pit and then ran, moving one foot after the other in rapid succession 4 to 8-10 times, sending small (10-20 gm.) pieces of gravel flying the length of the bird (6") away and an inch off the ground. Another bird with a deformed bill (which I collected) rolled over a rock which weighed between 300- & 400 grams. This rock was rounded out on level ground. ~~Another~~ Another flat rock (40 x 90 x 60 ^{mm.} ~~mm.~~ 358 gm.) lying flat on ^{level} ground was completely tipped over, & Dr. Ben-Hornew got a picture of ^{this} ~~one~~ bird in the act of picking over ^a ~~the~~ rock. The stomach of this bird contained many small (? grass) seeds and some 1/2" fragments of grass stem plus lots of fine black lava sand (1 ± mm. in diameter). I did not see fuliginosa feed in this manner here and did little observation of mockers. Collected ~~two~~ a pair of Neomimus on the low bush along the beach here. Their stomachs contained many insect

Feb 15 Punta Cevallos, Ispanola (Hood) Island, Galapagos
(1 1/2" beetle) remains, a large  green seed and
parts of fiddler crabs as well as much unidentified
material - they seem to eat almost anything they
can catch. No obvious difference in the crop contents
of the two birds. Saw no goats here, but lots of sign;
Seals not as common as at Pt. Suarez. A
map of this area would be roughly:



Feb 15 Pta. Cevallos to Gardner (near Hood), Galapagos.
about ~~noon~~ ^{noon} we sailed from here to the small ~~island~~ ^{island} Gardner, near Hood, which took about half an hour. Saw Masked Boobies and Frigatebirds flying about and a few Blue-footed Boobies feeding. Gardner is a low, small island, about $\frac{3}{4}$ mile E-W, 1 mile N-S. and 400-600' at the high (SW) part. From a distance the island appears quite red. We landed in a sheltered Bay on the W side of the island, and got ashore on a nice ~~rocky~~ ^{rocky} beach, from which we had to scramble up a small cliff to get to the main part of the island. Took a # of pictures here, starting with frame #31 to #37, the 1st picture showing brush and a rocky cliff. The vegetation on the W side of the island ~~was~~ ^{was} low and dry as on Hood, but much denser near the ground. Saw cotton here for the 1st time on the Galapagos. Find it much more difficult to move around than on Hood as the low vegetation constantly gets tangled in my feet. The soil is the same soft red soil as on Hood, well mixed with small, smooth lava rocks, and in many areas this has collapsed into the space between the rocks looking much like burrows. No goats here, no large cats. There were a number of small cliffs and rock out crops of very rough lava overgrown to a large extent by vines of cryptocarpus. The center of the island was fairly flat, grown to low brush, with just enough mesquite to be annoying. Only 2 really green plants, mesquite and haydenus, and a few Opuntia trees growing

Feb 15

Isla Gardner (near Hood), Galapagos.
with the same form as on Hood. Lowest was about 3 ft.
high, very dense, which is in the photo I took. All this
country was very dry. Ortiz very aptly demonstrated
this by pouring a little water into a depression on a rock
(he said) and then leaving his open canteen on the
ground; A conirostris came right to his feet to get water.
and then 2 Tropidurus. The E and S side of the island
is a cobblestone beach with a coral or coral sand beach
above, a few sea lions here. a red succulent and
Laguncularia formed scattered low mats here, and
inland of the beach Laguncularia formed dense growths
like low mangroves in the sierras. Didn't visit the
high cliffs at the N end of the island but Boobies (mostly
Blue-foots) and Frigatebirds were circling over this
in flocks. Perhaps due to the midday heat, I saw very
few birds. Cathartes seemed to be the commonest species,
looking like the grey bird of Hood; saw about 20 of these.
Nesomimus, of which I took one, was the next commonest
species, (10+ seen), which I found most along the beach
in the dense Laguncularia. They were as inquisitive as the
Hood animals. Saw half a dozen Doves, these mostly near
the rock outcroppings on the center of the island. The common-
est Geospiza seemed to be fuliginosa. of which I saw about
8. Most were feeding in the mesquite. I only saw 3 conirostris
for sure, none feeding, and collected one of these. There
was a beautiful black Buteo on the rock outcroppings at the
south end of the island. Along the cobblestone beach I

Feb 15

Isla Gardner (near Hood) to Pta Suarez, Hood, Galapagos
found a pair of Oystercatchers with a nearly grown young
bird, and got a nice picture of the pair (I hope). Heard
a couple of Tattlers. Tropidurus were fairly common on
the sandy beach, and looked like the Hood animals,
very bright, but perhaps a little smaller on the average.
The few Marine Iguanas I saw (6-8) were very brightly
colored like the Hood ones. Took a mock on the beach
where we landed; it was feeding in the rocks at the water
line. About 3:30 3 or 4 Audubon shearwaters came in
and started circling the cliff, and I think I may
have gone in; couldn't get to the area they entered. Finished
the roll of film with a shot of most of Gardner as we
sailed away. My impression of Pta. Cevallos would
be ^{an} area of lower vegetation than Pta. Suarez.
The most striking differences in the avifauna here
are the #s of Creagrus and the lack of Sula nebouxi,
as well as the scarcity of doves. Gardner is a low island,
with much denser low vegetation than Hood, and the
most striking feature of the avifauna was the ^{apparent} reversal of
the fulvifrons - conirostris # ratio. Two notes left out from
the Cevallos ^{area}. Found a dead end burrow 1 1/2" dia.
and 10" deep under a large lava rock, with a clear
runway entrance. Suspect it was of Tropidurus. Lost
the top of my rapidograph down a crevice in the rocky pt. &
making life most awkward for the time being. Slept most of
the trip back from Gardner. Weighed and gutted the birds I
shot, will skin them tomorrow. Wrote notes in the evening.

Feb 15

Punta Suarez, Isla Española (Hood), Galapagos.
Ortiz caught a Dronice (looked like hoodensis) on
Gardner and Carpenter caught many geckos on
Pta Cevallos under drift wood. I looked on Gardner
for Geckos but didn't find any. Koford gave me a
partial Tropic-bird skeleton from Pta. Cevallos. In
the evening at Pta. Suarez heard Oystercatchers flying
along the beach, calling loudly, several times after
dark. Rained a little during the night.

Feb 16

got up late and after breakfast finished my
notes and skinned out yesterday's birds. Carpenter
counted 107 doves flying inland over the camp in a
15 minute area. Most Cuthidee song in the A.M.
Spent the entire morning and most of the afternoon skinning
the birds I shot yesterday. Even though they were gutted
they were very soft + lost much of the belly feathers of
the Pta. Cevallos birds. The Gardner birds held up
much better. The workers all had a fair amount of
fat around the lower neck and were in heavy molt
on the wings and much of the body. They all managed
to drool on their breasts in spite of large wads of cotton
down the throat. They had 6-12 cysts under the skin
in the region of the skull-neck join, at ~~several~~^{several} points
around the neck. The finches showed less molt; the one
from Gardner was the fattest + finch I have yet handled.
The mockers may be post-breeding, for one testis was
after yellowish h, more so than the others. The eye was
deep brownish red, the bill dark olivaceous black, the legs

P. DeBenedictis
1964

(130)


Feb 16

Punta Suarez, Isla Española (Hood), Galapagos
greyish black with yellow foot pads. Skinning day old
pussies is a horrible job not to be recommended for
anyone. Hope they will hold. After I finished I
went out and took a # of pictures of Blue footed Boobies,
Swallow-tailed Gulls, Tropicbirds, mockers and G.
conirostris. The Tropicbirds were zooming around the
cliff in fine fashion, much U-gliding and "ten calling"
and going into (or trying) in cliff at many pts. Saw
one Creagrus threaten another in a ⁽²⁾ silent oblique
posture like that from which they usually call. Spent
a long time trying to photograph one in flight, don't know
how successful I'll be at it. Went down towards the
"hawk outcrop" along the S cliff, where there were even
more Tropic birds than where I usually look. Carpenter
saw a group of about 50 together at once and I got
up to 17 at once. After spending some time at this I
came back through the bush finding a nice gravel-
red soil-cava clearing where a mocker, a dove, 2
fuliginosa and a conirostris were feeding. The
mocker followed me around, then left; the dove feed
in loose soil under a fairly large (6" x 4" x 4") overhanging
lava rock, the fuliginosa hopped along picking up seed
from the surface and from conirostris pits and the conirostris
was busy making more pits in the gravel. Watched it for
some 15-20 minutes. It did almost all its foraging
by rock turning; the head is placed against something
~~solid~~ ^{solidly}, at the base of the mandible and the feet are moved

DeBenedictis
1964

(131)

Feb 16

Punta Suarez, Isla Española (Hood), Galapagos
rapidly in succession, unless a large rock is being turned, when it will push with both feet together (out of necessity) until it either gives up or the rock gives up & rolls. Sometimes the wing is opened for balance and occasionally & very briefly the carpal may be temporarily used as a brace, although the head is the main support. I was able to get to within $2\frac{1}{2}$ ft. of the bird. The bill is used as a tool in two main ways. The bird may grab a stone and pull it out & throw the stone aside, a 10^g gram stone being thrown 4^{ft} inches to the side. Grass stems and small pieces of stick were seized in this manner. Two large stones moved in this way weighed 23 and 16 gms. respectively. The former was on a slanting piece of lava  and was slid along the lava to rest on the flat. The latter was wedged in a ~~gap~~ hole of a large piece of lava and the finch spent about a minute peering it. After it had succeeded, it picked up the rock to a feet (normal postures) height, then threw the rock 2' to the side. Got a picture of the bird tugging at this rock. The bill is also used as a probe and scrape. It is placed with the culmen parallel to a lava rock, the tip down a small crevice between a larger rock and small gravel, and then the gravel is scraped aside in a movement of the bill to the back and side. I saw this done 2 or 3 times, and suspect it is

DeBenedictis
1964

(132)

Feb 16

Punta Suarez, Isla Española (Hood), Galapagos
quite common. Small seed and bits of grass
stem are very conspicuous under the surface
gravel and small tufts of grass, 1" high
and 1 1/2" in diameter are to be found under
many of the small pebbles the finches work under.
When it decides to work an area it will
stay with that area for 1-2 minutes, usually
going down only 1 1/2 to 2 inches to get to the
seed and make a pit 2-3 inches in diameter.
Two fairly good sized stones flipped over (flat
stones on level ground) weighed 74 and 63
gms ~~respectively~~ ^{respectively}. The fuliginosa. I watched
never attempted to feed like this and usually
flew to a nearby bush after 1-2 minutes
of feeding on the ground. They are much
shyer than the conirostris and seldom allow
approach to 20 ft. while conirostris typically
allows a 10 ft approach. Saw a Brown Noddy
along the cliff, 1 ♂ for this end of the island, (saw
one at Pta Cevallos), and the 1 ♂ Oystercatcher on the S side
today. About 8 goats between the cliff and camp
and saw 2 Green Herons flying to the Pt.
from the east about 6 P.M. four Ruddy Turnstones
on the cliff at the S side of the island, and
1 on the beach near camp. Saw one Wandering
Tattler walking about up in the Blue-footed
Booby colony near the salt spray area from the

Feb 16 Punta Suarez, Isla Española (Hood), Galapagos.
big blow hole... lots of doves flying to the Pt. in
the evening and 2 Night Herons came into
the beach in front of the camp after sunset,
which was a beautiful orange and pink
glow, the effect heightened by the crescent moon, Jupiter
and Venus. Swallow-tailed Gulls going N
at dusk flew over without calling. In spite
of the very bad start for the day, it was
very pleasant in the afternoon. Hail skinning
by now!

Feb. 17. Wake up late this A.M. Doves flying over as
usual. After breakfast Miguel Castro took
Koford, Ortiz and myself to the white sand
beach at the NE side of the island. ^{There} ~~They~~ were
few birds, boobies and frigatebirds only, along
this stretch but I noted a dozen or so moths
flying into the island from the N. The sandy
beach was almost as fine as the beach at Tortuga
Bay. There were sea turtle tracks everywhere and
we saw half a dozen ² more or less recent nests
(saw a Green Turtle when we went to Cevallos
on the 15th). No shorebirds on this beach.
We walked along the beach for some time, then
cut inland to a small peak inland from the
beach. The brush near the beach was very dense,
much like that near Punta Suarez and composed
of the same sticky plant species. About 50 ft

Feb. 17

East end of Isla Española (Hood), Galapagos.
elevation above the beach the country opened up considerably as we entered the Cordia belt. The vegetation was very open. paths 10-50 ft wide being easy to find. Scattered Cordia trees, 20-30 ft. high just beginning to bud and leaf, and scattered lower mesquite and acacia trees were the dominant vegetation. The soil here was soft, red, with loose lower rocks of variable size, and there were occ. lichen-covered outcrops of ~~rougher~~ lava. No undergrowth at all, except for sprawling mesquite bushes. Much of the vegetation dead. At about 100 ft. elevation caught a Dromicus which was sunning itself on a large lava rock (9:30 A.M. somewhat overcast and not very hot.). At about 200 ft. kept an hour later, snatched a large snake which was moving rapidly across a clearing near the top of the Cordia belt and at c. 250 ft. got another snake which had been crawling in the rough lava. Tropidurus go up as far as we did and in equal numbers as at Punta Suarez (a lizard every 20-25 ft., ♂s 30-40 ft.). They were very wary here, and I did not get many chances to even try to catch one. I saw a # upto 4 ft up in Acacia trees; these ran down the trees to the rocks when I approached. In a rock outcrop at c. 100 ft. we found a Short-eared Owl. It is a smaller, rustier colored owl than the Calif. form. with orange eyes. It allowed approach

Feb 17

east end Isla Española, (Hood), Galapagos.
to ~~5~~ five feet, and I took one picture of it. (Could even see the horns). No sign of pellets. About about 250 ft the Cordia dropped out and was replaced by variably dense growths of Acacia and mesquite, mostly with scattered leaves and no flowers. Several large seed pods on most mesquites. The vegetation was only 20-30 ft high in all areas, and heavily lichen covered. Collected most of the half dozen arborescent types which grew on the plants. Near the 1st peak we visited we found (in the valley to the W) half a dozen dry pot holes, 20-50 ft across and which at one time must have had 6-8" of water. Not even water under the rocks and just barely damp. Several nice flowering Parkinsonia trees here, and saw a ♀ Carpenter bee at one. Opuntia trees were fairly frequent here, spaced at 300-400 ft intervals (except that they often grew in clumps of 3-6 trees). They were all the thick, short trunked trees, with a rounded top (P) as on Gardner, and not more than 15 ft high. All the trees I saw were mature, no cactus pads or young trees at any of the larger plants we visited. Travel through the upper zone was not difficult, although in places it was easier to walk ~~through~~ ^{along} the rock out crops where the vegetation was open. We saw or heard goats at frequent intervals along here, but most of the goat sign was

Feb 17

East end + center of Isla Española (Hood), Galapagos.
very old suggesting a small population. At the base of many of the rocks there were dead, ~~cut~~ ^{cropped-off} grass plants, and fresh grass was just beginning to come up at the base of small lava rocks in many places in this area. About 2 hrs. after we started the sole to my foot began to rip loose at the top and I had to strap it together, an arrangement which lasted until evening fortunately. Myiarchus were fairly common in the Cordia belt and higher at the east end of the island - saw 20⁺ - but very silent. Only heard chickening once. They are not as tame as on Santa Cruz and do not come to movement as the Santa Cruz birds do. I am not sure if the "scarcity" at the W end of the island is due to no birds or to the mid day period of inactivity which is very striking, especially in terms of total song, everywhere on Hood. Mockers are not quite (although nearly) as conspicuous as at Pta. Suarez, although this may be due to the heavy vegetation. They are as noisy and curious here as elsewhere. Did + see much foraging; what I did see largely involved thrashing. Cathartidae, probably because of the constant singing, is the most dominant part of the avifauna. It occurs everywhere and are frequently seen and heard at all times of day. Geospizas are not difficult to come by, but puliginosa seems to be at least as common as conirostris in the high country. The

DeBenedictis
1964

(137)

Feb 17

Center of Isla Española (Hood), Galapagos.
fuliginosa hop on the ground looking for fallen seed
or clamber about in the trees. Many males were singing,
early in the day. Coriostictus was often seen in the
trees, but did not appear to be foraging. They sang
from perches, and flew to trees when alarmed but
did most of their feeding on the ground. Pts from this
species (a doves) were frequent, and I saw about
a dozen birds digging insistently, although digging
did not seem to be as prevalent as at Pta. Suarez,
perhaps because there was more seed on the surface.
Doves were everywhere, perhaps the commonest or
2nd commonest (after ~~the~~ Certhidea) land bird noted.
There was no water, but most of the birds we saw
were actively picking seed, etc. off the soft soil both
in the open and under the trees. Several doves
were up in the trees, but did not appear to be feeding.
We saw no more owls and only one dark Hawk
soaring overhead. We worked W from this 1st peak
we visited to another low peak and then from
this SW to the highest peak of the island. The
vegetation in the Valley E of this 2nd peak was very
dense and sticky, elsewhere fairly open. Caught
a fourth Dromicus which was "foraging" in some very
rough, open lava at the S base of the 3rd peak;
about 10:30. This was the last snake I saw, the
4 I caught being the only ones I saw. We saw
no signs of Tortoises or land iguana anywhere. We

DeBenedictis
1964

(138)

Feb 17


Center of Isla Española (Hood), Galapagos.
did not climb the tall peak but went over the ^{ridge} ~~ridge~~
at c. 350 ft., and angled ^W ~~W~~ for a ways, then W toward
camp. The country ^{here} ~~was~~ was very open and dry;
found one dry pot hole and saw one group of ?
goats (the largest group we saw on the trip). We
ate lunch under an Opuntia, and saw a # of small
black ants here. Flies bothered me a little but
they are not nearly as bad ~~at~~ at Punta Suarez. A
few mosquitos. Only saw a Phyllodactylus under
a rock near here. The trip from the high peak
to camp was uneventful. We went through very dry
open mesquite-^{acacia} ~~acacia~~ with large areas of red soil-
lava rock in between, where Geospizans, mockers
and doves were conspicuous. Lots of Tropidurus.
Much of this country reminds me of some of
the low open scrub forest on Mt. Diablo, even the
soil texture being much the same. In the distance
many of the calls of Neomimus are quite like the
"jive" call of Calif. Jays. They and Cathartes and
goats made the only noise other than ~~ourselves~~ ^{ourselves}.
About 3/4 mile from camp we came across a Myiarchus
which I collected. The trip would have been
much ^{worse} ~~worse~~ had not there been a fairly constant
scattered overcast and had not we been almost
constantly in the ocean breeze. Although the goats
maybe ruining the native vegetation, the trip would
have been impossible if the goats hadn't have

Feb 17

Punta Suarez, Isla Española (Hood) Galapagos.
cleaned out all the underbrush. We got into camp about 3 P.M., thirsty and tired. Got even more sunburn than before. Put up the flycatcher, which showed no sign of molt and was in top breeding condition, and then slept the rest of the afternoon. In the evening Dr. Bartholomew went out to the Masked Booby colony to get some night-time temperature of Boobies and everyone went along to watch the fun. The Boobies were most indignant about having the Thermistor probe shoved down their throat, and Carpenter was ~~so~~ ^{called} the world's best natural Booby snatcher. # of ^{Masked} Boobies came into the colony while we were there, but there was very little activity in the Blue foot colony. Very tired, & went to bed early.

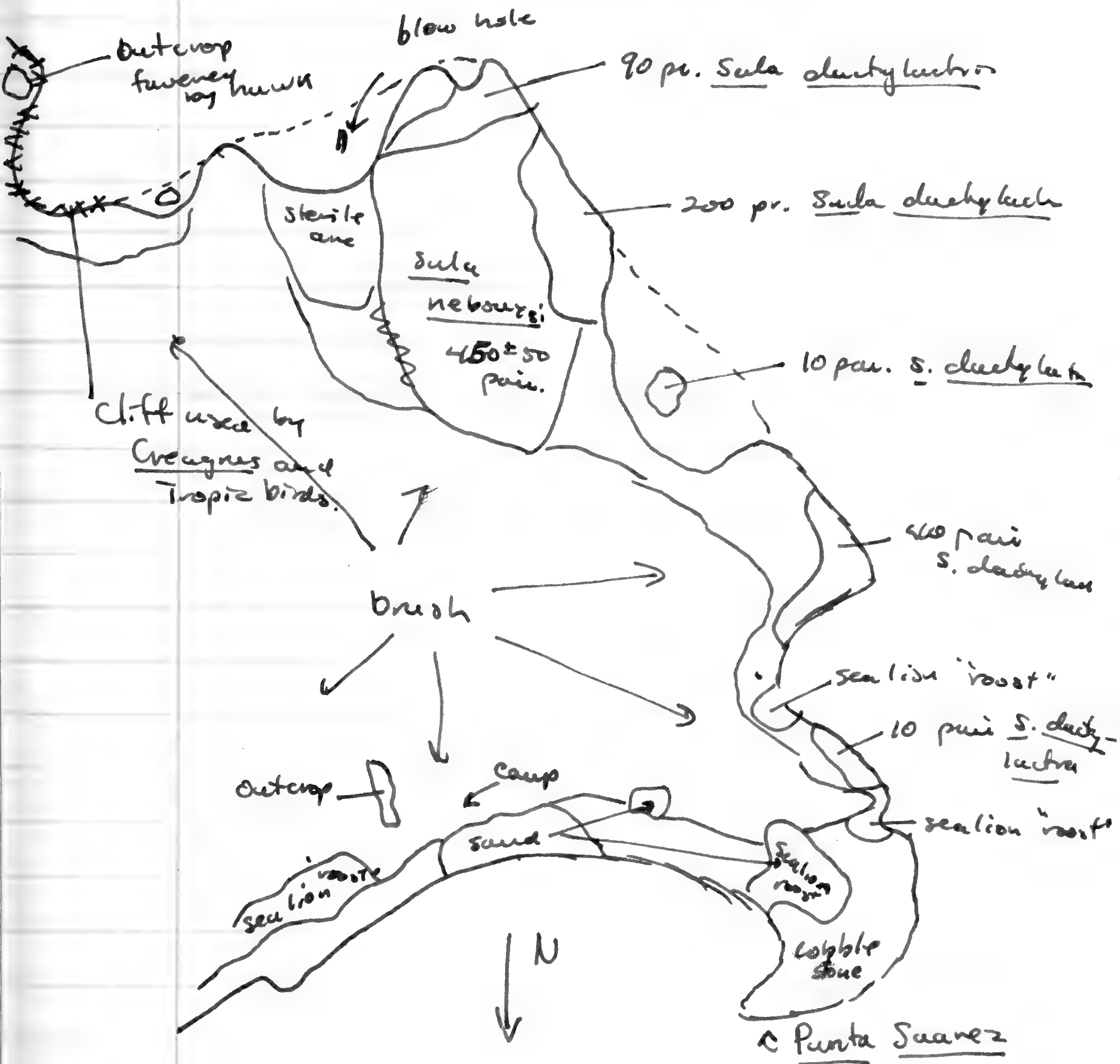
Feb 18

Apparently rained a little this night so my tarp is quite wet. Got up late and after breakfast spent the early A.M. writing notes. Very tired. Slept about an hour in the A.M. and then went out around the Pt to try to make a map and some estimation of the seabird colonies. There was a young Green Heron feeding in the lava near the camp, chasing crabs about on the exposed rocks. It caught two, plus the legs of 1 or 2 others, while I watched it. It also took a lot of fish. I saw little of note most of the A.M., besides the map. There are two voice types of Masked Booby. One, smaller than the other, calls "swee swee," high, throaty. The larger bird gives a loud

Feb 18 Punta Suarez, Isla Española (Hood), Galapagos.
rough "wak. wak" call, explosive and ear shattering.
They erect the head and neck feathers when one
approaches the nest, and make (intention biting)
downward movements of the head, bill pt. open.
first to the one side, then forward, then to the other
side and back again. The movement is very smooth.
Noted two interesting forms of thermoregulation.
At midday they gular fan considerably. They
brood the eggs & small young by placing the feet
under the eggs, and the breast loosely above the egg
to shade it with the body . Large young (500+ gm)
can thermoregulate by themselves, according to
Dr. Bartholomew. The brooding adult also erect
the scapulars and back feathers so that air
can move under this region. Watched a Blue-
footed Booby skim low along the surface of the
water then angle shallowly in and go under,
for a second or so, come up, and float on the
surface. They float very light. head + tail up.
back down. Their reaction to approach to the
nest is quite unlike that of S. dactylactes. They
point the bill at the intruder, call, and shake the
head rapidly (8-12 times/sec.) up and down. Show
the same head + neck feather erection of dactylactes.
I ^{estimate} ~~there~~ there are now c. 350 pairs of dactylactes
and 450-550 pairs of nebouxia on the Pt. now,
the Blue-foot pop. being somewhat depleted by the

Feb 18

Punta Suarez, Isla Española (Hood), Galapagos.
of fledged family groups. A rough map of the area is:



Feb 18


Punta Suarez, Isla Española (Hood), Galapagos.
Most of the W shore is cobble stone with sand areas where sea lions spend the night. The S. shore is cliff from where the Masked Boobies nest, to the E., and Crangon nest here in small #s, the best #s beyond where the Tropicbirds 1st appear. Blue-footed Boobies nest on the cliff in small #s in addition to those on the flat, adding another 100-150 pairs to the total. Audubon shearwaters nest in the cliff from the Blowhole east. The brush to the S of the pt. tends to be very open, and it is higher at the E end of the pt than at the west. Several shelves, none or less covered at high tide are indicated by dashed lines. Amblyrhynchus and sea lions favor these areas; Terns and Tattlers are usually found on them as well. There are a # of outcrops not indicated on my map in addition to the one near our camp. I have done most of my observations in the area between the outcrop favored by Hawks and the Blowhole, along the coast & inland to halfway across the pt. Some sign of Albatross along the cliff in this area and in the Blue foot colony. After completing the map I ate lunch, then went out to do a little observing, and take more pictures. The camera reformed the end of the film oddly and I have no idea what sort of pictures, if any, I have on the roll.

Feb 18

Punta Suarez, Isla Española (Hood), Galapagos.

Two sycstraculus were feeding in a shallow tide pool for a while when one started bathing, splashing water over its back. The other then flew off. The did a little feeding, but couldn't see what they were getting. They often got up together and fly across the point calling a high, $\frac{1}{2}$ sec. long whistle, "p hiew" or a shorter version of this same in rapid succession, then going on long into the night. After lunch I spent about an hour in a Craxus colony of a few pairs, and saw 2 instances of mutual preening. A Brown Noddy was feeding close to shore in the surf and I could see it one drop its feet like a Petrel as it dropped down to pick up some food. Worked E along the S. Cliff. Lots of Tropicbirds soaring along the cliff. Heard two calls, the "ten call" given from the "U-flight" described earlier and a harsher, lower, "Pew" "Kew" "Kew" "~~XXXXXX~~" and "nt nt nt"

which was given from normal flight. There were two large Green Turtles feeding ^{just outside} the surf below the cliff here. The came to the surface, breathed, floated for a while, then dove. A few Puffins coming to the ledges by 4: At the Top of the cliff 2 of the "humb outcrop" bur are a # of burrows in the soil that look like old marine iguana burrows, mostly partly filled in. On the way back stopped to look at

Feb 15 Punta Suarez, Isla Española (Hood), Galapagos.
some feeding Coccothraustes. A Coccothraustes spent some
time at a pit removing small gravel, stones, and pieces
of grass stems, the smaller objects with the feet or bill,
the larger with the feet using the head as a brace.
The feet seem to be used in rapid succession. Most
smaller grass stems are seized in the bill and lifted
out and thrown aside. Several small stones were
seized with the bill and dropped in the bottom of the pit,
then kicked out. An 11 gm. stone was flipped out of the
pit while the bird pulled on a 61 gm. stone moving
it from a vertical position (wedged between gravel)
to a horizontal one at one side of the pit, and then kicked
the stone out of the pit using the feet-bill-brace system.
It removed a 63 and a 39 gm stone which were em-
bedded in the gravel next to each other in rapid suc-
cession, with 3 seconds. I could not see what it was
eating but the bottom soil was heavily covered with chaff
from grass, and presumably their seeds. This bird
dug a pit 6" long, 4" wide, and 1 1/2" to 2" below the
level of the surface gravel. The same bird at another pit
flipped over a 72 gm. concave-concave stone, about 1/4
buried in the gravel,  using the bill-feet
lever system. It ~~hopped~~ ^{hopped} along the gravel, probing under
stones, pulling on grass tufts, and flipping very small
stones looking for likely spaces. 2 or 3 ~~small~~ ^{fuliginosa} and a
♀ plumaged Coccothraustes were working the same area and
were 3 or 4 times displaced by the male, who usually

Feb 18

Punta Suarez, Isla Española (Huel) Galapagos.
did not stay at the spot where the other bird had
been working. Saw one ♂ taking the buds of the
common low plant of the Blue-fl. colony, and
another eating the green leaves of
This is likely their major water source. The two
fuliginosa working near here were also digging in the
same manner as the conirostris, although they seemed
to be less efficient and moved gravel weighing for
the most part less than 10 gms. The largest stone I
saw moved was lying flat at the top of the pit and
was kicked aside and a little down. It weighed $1\frac{1}{2}$ gm.
The pit dug by this bird (♀, plumaged) ~~was~~ ^{was} $2\frac{1}{4} \times 2\frac{1}{4} \times \frac{3}{4}$ "
deep. This bird dug quite constantly, while another ♀
plumaged bird nearby refused to probe under stones
and in small pits and only occ. dug a pit of its own.
A dove working here scraped aside very small gravel and
soil with its bill from the base of larger rocks. A worker
here was seen thrashing for some 5-10 seconds in the
remains of a low bush, before it wrenched off. Most of
the other mockers here were just curious as to what I
was doing. (Last night we watched a mocker chasing
moths which were flying out from the island from the N.
It was rather clumsy and slow flying and did not
seem to catch many of the moths, but went 20-30 ft.
up into the air after them.). I had out the skins today
which attracted many flies; a ♀ Tropidurus became
much attracted to the flies. She would come out

DeBenedictis
1967

146

Feb 18 Punta Suarez, Isla Española (Hood), Galapagos.
and run onto the fly net. snap up 5-6 flies in
10-20 seconds, then run to a bush stem 2 ft
away and sit in the shade for 20-30 seconds,
come out and eat more flies. She spent most
of the mid-day doing this. In the evening
there was a heavy flight of Craegus, and the
Bulles and Oystercatchers made quite a racket
flying about ceiling at dusk. The Oystercatchers
persisted at least until 10 P.M. A very hot,
calm day today.

Feb 19 Got up fairly early. Not much unusual today -
lots of Ceblidea song. More finch song than
usual. Spent the early A.M. finishing last night's
notes and then got my gear together and went
out around the Pt. Took about 25 pictures of
various things with Plus-X black & white film.
Just as I left camp found 5 Ceblidea in
conflict. 3 in vigorous song, but one being much
chased by the other two. One would go low,
often to the ground with wings fluttering and
beg from a singing bird. Went out in the Booby
Colony and along the cliff for a while. Saw
one nice ♂ minor Frigatebird showing clear
green sheen. Not much tropicbird activity.
Spent a considerable time just watching Cra-
egus, seeing a lot of aggressive behavior. Went
into the bush to take some pictures and found

DeBenedictis
1964

(147)

Feb 19 Punta Suarez, Isla Española (Hood), Galapagos.
a complete dead adult Albatross with a Brit. Mus.
band # 5007269. The dermestids here had pretty
well cleaned out the meat so I stripped off the feathers
and took the skeleton back more or less intact. Two
Mockingbirds were very interested in the dermestid
and fed for a while by my side in the pile of skin
and feathers I had produced. Two doves were
feeding under a bush near where I found the
Albatross, and I shot both for skins. They were
both ♀s with poorly developed blood patches and
no ~~ova~~ ^{corpora}-like structures in the ova. showed no
sign of molt. Skin very tough and I had no
trouble skinning them out. After this was
done I ate lunch and then went out to the
Masked Booby Colony and collected one bird
off a nest with one egg. The bird had the long
"whistle" call, and Bartholomew thought it was
a "small-headed" bird. With Dr. Miller's Balance
the wt was 1.7 kgs. The mouth lining and
gular pouch and face were very dark bluish black.
The iris golden, the feet blue-grey. The bill was
pink, whitish at the very base, and yellowish at
the tip. The bird showed no fat; much muscle
hung to the neck region and the dermis was very
fibrous, the feather bases very conspicuous and
rough from the inside, although the bird did not
seem to be molting. The preunglands were very

Feb 19 Punta Suarez, Isla Española (Hood), Galapagos.
large, c. $3\frac{1}{4} \times \frac{7}{8}$ inch and extremely tough, not
shedding oil when they were cut. This is much
in contrast to the doves which had almost no
preen gland at all. The testis were dark grey,
firm, evidently well regressed. Spent most of
the afternoon fighting with this bird, then
preserved my snakes. I suspect I have mixed
up the two specimens from Pta. Suarez as the
longer one was the 2nd I caught. Lots of
doves going to the Pt and Creagre flying
out in the evening. Much Ceuthicus song. About
6 I realized I had not pickled my snakes and
went out but saw only one bird. Hope Bowman
has some. Spent the evening packing and writing
notes. About 5:30 it rained fairly heavily for
a while, but the sky is fairly open and it may
not last long. Leave for Bainington early to-
morrow. A very pleasant stay here. One of the doves
had a fully ossified skull, the other (#340) was .

Feb 20 was rudely awoken about 4:00 A.M. and got up, threw
my things together and about 5:30, before light, we left
Hood on the Patrol boat for Bainington. It had been clear
and calm last night, no rain during the night.
My tarp was quite wet. There was no sign of Creagre
at any time during the morning. The trip out
was very smooth, but there were very few birds
out. Frigate birds stayed with the boat for

Feb 20

Isla Española to Isla Santa Fe, Galapagos.
for some time. Coming out of the island there
were a # of Oceanites gracilis, all single birds,
and occ. Oceanochroma tethys, the latter more
common the farther out we were. Audubon
Shearwaters and Masked Boobies were seen in
small #s, scattered all along the crossing and
a few Brown Noddies appeared about 1/2 way
to Barrington. I slept most of the trip out,
awake a little at the start and at the middle
of the crossing. About 10 we arrived at Barrington.
From a distance it looks much like Hood.
The terrain is low, the general color of the island
reddish. Lava outcrops conspicuous. Most of the
shore is a lava-fish cliff, much covered with
guano but only a few Masked Boobies along the
shore + Frigatebirds and occ. Brown Noddies.
The island differs from Hood mostly in that its
vegetation is much more open, the trees widely
scattered, and the Opuntia is much more conspi-
cuous, by far the dominant plant of the island. The
island is very dry, with Cordia just beginning to
leaf. We landed in a beautiful Bay at the SE
corner of the island, this the usual landing for
Barrington. The water here was so clear we
could see fish on the bottom, which easily
allowed the patrol boat to enter (the Eua-
doricans are extremely cautious about their

Feb 20 Isla Española to Isla Santa Fe, Galapagos.
(boat). The east side of the island is a goat-free
island with a heavy growth of Opuntia and some
green vegetation. A sandy beach is at the S end
of the harbor and a cobble stone beach at the W
side. A few sea lion and 3 Sanderlings here.
A # of Frigate birds soaring about here, seemed
to be mostly all magnificens. Brown Pelicans
were fairly common and saw 2 Green Herons and
a Wandering Tattler. We landed at the sandy
beach and then walked quickly to the N.W.
to a high ridge (cliff) where the altitude rose
quickly to 300[±] ft. and spent about 1½ hours here.
The vegetation on top is primarily a mixed Opuntia-
Cordia forest, the Opuntia commonest, with open
dry brush 2-3 ft. high between, this without
leaves. The Opuntia was in flower and the Cordia
starting to leaf. Lichen covered rocky outcrops and
patches of red-soil & lava rocks were not infrequent.
I saw and photographed a large Conolophus
which was in a ^{rock} lava outcrop at the base of a Cordia-
Opuntia growth. The lizard was somewhat shy
and only allowed approach to about 10 ft. when
it ran off about 6 ft farther in to the rocks. Tropidurus
was fairly common the ♂ a greyish, dark cross-
banded animal, the ♀ streaked greyish and buffish
white, with black lateral fields. They were fairly
common and about as shy as the animals on

Feb 20 Isla Santa Fe (Barrington), Galapagos.
Hood or Santa Cruz. I saw 4 or 5 on the Opuntia
trunks and a few in Cordia trees; on the beach
there were 2 dead sea lions covered by a sea
of maggots which had attracted about 20 of the
lizards. Dr. Carpenter caught 15 in 5 minutes with
no trouble. Mockingbirds were fairly common at all
levels and sound and, at very casual observation,
much like the Santa Cruz birds. They are more
like the Hood species in bill form, but not as large.
They look buffier and plainer on the breast to me. The
bill and feet of both birds I shot were completely
covered with Opuntia pollen, and I saw one or
two fussing in the Opuntias as well as on the
Cordia. The ^{legs +} feet were dark bluish grey and the
foot pads only slightly lighter. No obvious molt on
the birds I took. When we left the harbour 2 birds
few in from the goat-fence island and landed on the
boat. One left immediately when we started but the
other stayed with the boat until we got ^{past} the NE
~~corner~~ of Barrington, when it took off in a southerly
direction. Finches were not too common. I saw one
~~Croospiza~~ Scardinius feeding in an Opuntia and
heard what sounded like fortis singing in the
distance. G. fuliginosa was the commonest finch
about; saw 15 ± of them. They gave both a high
"che-wee" song and a lower "per chee" song. The
black ♂ I took sang the latter song. Both birds

1964

(152)

Feb 20

Isla Santa Fe (Barrington), Galapagos.

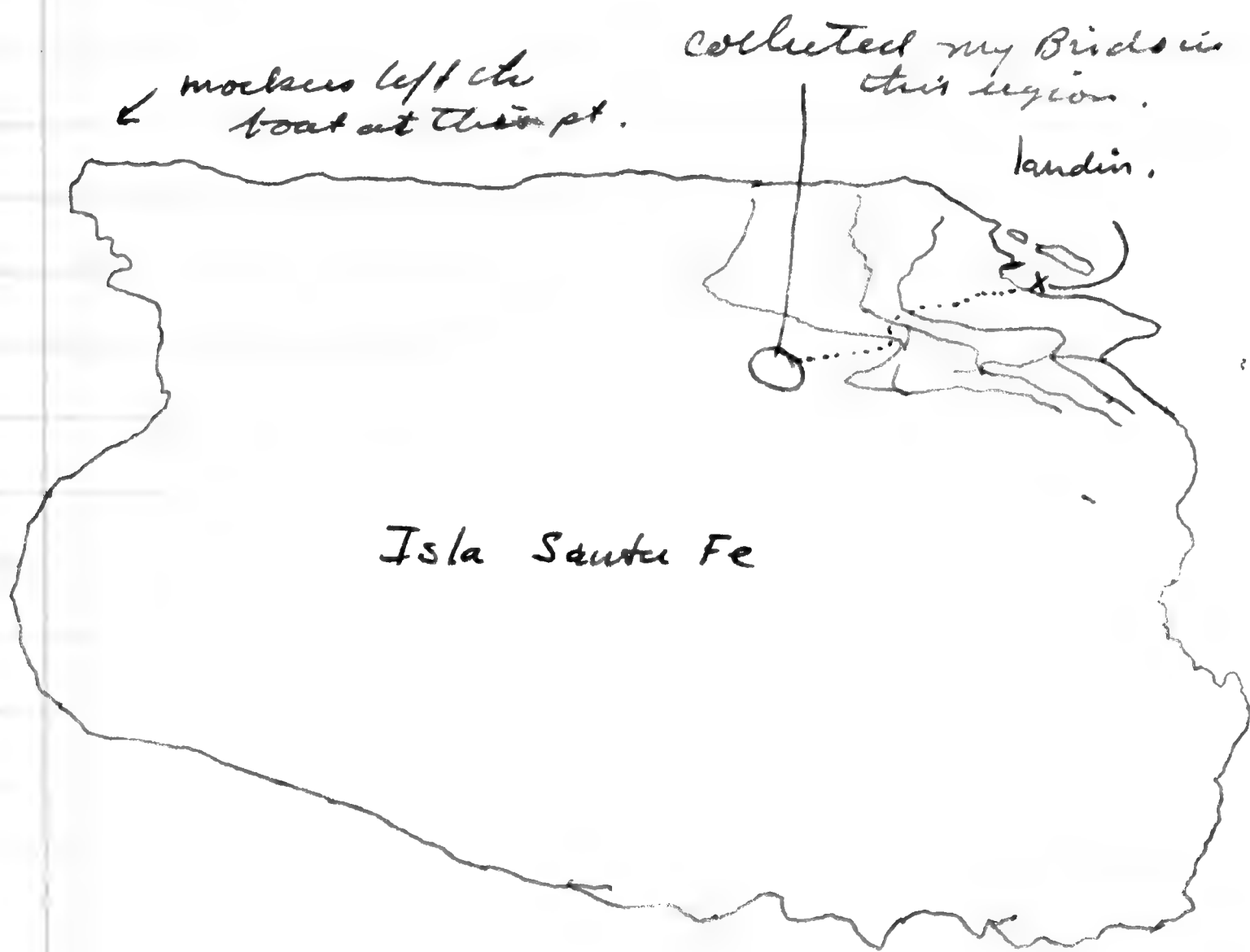
had the bill heavily covered with pollen; all the birds I saw were working in Cordia buds and Opuntia flowers and the crops of the two birds contained fine black lava sand and what I think was Opuntia pollen (or ground buds). The dull plumaged bird was very heavily worn, and showed no signs of body molt. The only other land bird species I saw was the dove I shot. It was on a bare soil patch. Its crop contained many large rocks but no obvious seed or seed parts. It dribbled water copiously when I squeezed it (shot not fatal) as did the Hood doves. Goat droppings and skeletal parts were everywhere but I saw no goats. About 12:30 we boarded the Patrol boat again and went to Academy Bay. Saw lots of Noddies and Audubon Shearwaters on the way and a Tropicbird just off Jensen Island. There were about 100⁺ Northern Phalaropes on the water off the NE corner of Barrington, in 3 small groups, and scattering Boobies and Frigatebirds along the route. Only took about an hour to get in; Noddies on and along the ~~left~~ banana as usual. Spent an hour after we got off the patrol boat finding out what's going on around here now. It was a pleasure to get off the boat, for although the trip was very calm, the Ecuadorians had two goats strapped to the back of the boat and this caused all 15 or so of us to the front of the

Feb 20 Academy Bay, Isla Santa Cruz, Galapagos.
boat. Not much exciting going on here while we
were gone. Nate Cohen brought a basium from
Stephen Devine (Bud Devine's son) which was
found near his store on Feb 13 by Steve. This
was presented to me in the evening. About 7:30 -
after I figured I was done skinning for the day, Dave
Cawans came down from the highlands with
a Neoceryx and 2 Gallinules which Sigurd
Horneman had shot this morning. John Hendrickson
had gutted the birds and stuffed the body cavity with
alcohol soaked towels, making weights impossible.
The Neoceryx had no fat; the feet were bright reddish,
the bill green at the tip and red at the base, very bright.
It looked little larger than the Black rails. The
eyes looked like they were red in life. Saw no signs
of molt except on the very back of the crown (4-5 feathers).
I gave ~~one~~ ^{one} of the gallinules to Steve Bittes (I have
been using his cotton so a fair exchange I guess). It
was a ♂ (testis 13x8 mm.) the frontal shield and base
of the bill were bright red, the tip of the bill greenish yellow.
The feet & tibia were yellow, the flat sides of the tibia
and femur bright red (waxy) like the bill. The ♀ I
kept had the same bill color (tip green) but the legs
were almost wholly greenish yellow, with a faint suspicion
on the sides of the ~~femur~~ ^{tibia} and ~~moor~~ ^{bright} reddish-orange
color on the lower femur. Will try to get the exact dates
on these birds tomorrow.

Feb 20

Isla Santa Fe (Barrington), Galapagos

a rough map of Barrington (Santa Fe) showing
the contours at the area we visited is include
below:



↑ N

map. added Jan 21.

Feb 21

Academy Bay, Isla Santa Cruz, Galapagos.
Cool and overcast this A.M. but no rain to speak of.
Went to bed about 12:30 last night and got up c.
6:30 and got my stuff together. Went to Wilson's
for Breakfast and then took off along the old trail
towards Bella Vista. I went up ^{rapidly} ~~steeply~~, not stopping
until I reached the Barranco. From here up I
spent much time chasing odd songs looking for
Camarhynchus parvulus. The vegetation has
changed greatly since I last went up, in late
Jan. In the lower zone the ground is heavily covered
with grass 1 ft to 18" high and low herbs are
very conspicuous. All the trees are in leaf and it
is almost impossible to see far into the forest.
The bushes along the trail are now almost knee
height and nearly cover the trail. Farther up
the trail, above the Barranco, the change is ~~rather~~ ^{less well}
defined; the low vegetation is higher and the trees
have more leaves. Evidently it was quite muddy
for the trail is well covered with hoof prints. The
greatest changes in the birds are the absence of large
flocks of Geospizini on the trail and the presence
of family groups of most of the smaller species (G.
franklinii, fortis and scandens, C. parvulus) +
family groups (well grown young) of Nesomimus
and Dendroica pelicea. Platyspiza was much
more conspicuous than the last time foraging males
were to be found everywhere along the trail and when

Feb 21

Academy Bay, Isla Santa Cruz, Galapagos.
Looking into the trees, about every 3 or 4th ^{large} ~~bird~~ bird would be this species. In addition to the "pec-chun-wee" song, I heard a "chun chun chun chun" song and a "chun-wee" (the phrase repeated several times) song from the species. I saw only one Castospiza, a singing bird working far up in a tree, without tool using. The song was a deep rough "chöck chöck chöck chöck chöck" sometimes followed by a soft descending "chuuuuu". The bird foraged between 15 + 30 ft up in the large branches of trees covered with lichen. Spent a long time chasing Camachyarchus songs, all of which proved to be C. parvulus. I heard fast songs of cheer and rough, hoarse two ^{parted} ~~part~~ syllables "che-wee che-wee che-wee", and found a song of G. fuliginosa and G. scandens to be quite similar to this. The single parted syllable may be cheer or hoarse sounding, and varies considerably in pitch, approaching Ceillidley on one hand and G. julis on the other. The only C. psittacula I saw was not singing: it was low in some bushes and appeared much larger than the parvulus. The bill was deep and rounded, D shaped in stead of the J shape of Platyepiza which it most resembled. Much of the ^{size} ~~size~~ difference was from the extreme feather erection it showed. Ceillidley proved to be a great problem for high up it was present in great #s and certainly


Feb 21

Academy Bay, Isla Santa Cruz, Galapagos.
had 9 or 10 different songs, some much like the songs of Comarobrychus, although usually higher pitched. They seemed to show a little wing flashing like a Kinglet when they jumped. I saw G. fortis chasing this species from a bush, and a fuliginosa quite vigorously chasing a Comarobrychus parvulus about in a bush. I got to within sight of some of the buildings of Bella Vista, but did not go to the town. I took the old trail until a fork which cut over to the new trail, and went up this for half an hour or so. Three Scaevola and a ? lowest tree were quite conspicuous here, and the undergrowth made passage into the woods almost impossible. Many flowers on the lower bushes and on some Cordia, Morbus, Culicida, and Comarobrychus were the commonest birds here, but I saw a few G. fuliginosa and fortis and Yellow Warblers as high as I went. I saw most of the Myiarchus. I noted into the Transition zone to as high as I went. They seemed to prefer open areas in the forest and were fairly common along the new trail which was 15 to 20 ft wide in most places. (although only a foot path has been cleared of under brush). One bird passing near a spot where a Phrynoscephalus had landed gave a rough, hollow throaty "preet preet preet per per per preet preet" etc, with much the quality of M. cinereus but not as loud. The creature

Feb 21

Academy Bay, Isla Santa Cruz, Galapagos.
retracted and the neck stretched considerably.
4 birds chasing ~~each~~ other, as if in pairs, repeated
called a soft rough "pre pre pre pre" call
about 1 second long. I heard not other calls today.
The birds are usually silent ~~when~~ ^{when} found. I saw
Vermilion Flycatchers frequently from the ^{barren} ~~barren~~
up to where I turned ~~back~~. The perched very
high, usually on the highest trees, while Myiarchus
tended to perch much lower. I saw mostly red
males but 4 or 5 Yellow plumaged birds, 2 of which
seemed clearly to be attached to a Red male.
The flight song was given frequently; must have
seen and heard it 20 times. The performance
was always basically the same, although the
length varied considerably. The bird rose 15 to
25 feet above the vegetation and circled calling
a rapid soft clear "chee wit" ^(snap) c. 1/4 sec. long and
1/2 sec. between calls. From below the bird looks
long tailed; the wings extend straight out on the for-
ward edge and ~~the~~ ^{the} ~~primaries~~ ^{primaries} are broadly spread.



the high undulates up and down,
rising on each call, the snap just after
the peak of the rise. The bird flaps a
rapid shallow wing beat on the down + up part of the arc
, about 15-20 strokes, then a short glide.
in the glide wings are held quite high above
the body and the snap seems to occur when

Feb 21

Academy Bay, Isla Santa Cruz, Galapagos.

The 1st wing beat takes place. The primaries are slotted in the glide & the snap may be their snapping together. Specimens in the Darwin Station collection do not show any special modification of the primaries for this. Picked perched rattles the bird, audible at 25' ft., and gave a "pew" note, soft & whistled, and a "cheewit" note much like that of the Pigat song. I saw 2 Cuckoos along the upper trail; one flew across perched in an open bush and then disappeared into the denser vegetation. The other flew across the trail high up. Several birds singing. Close at hand the song is "urrrrrrow cow cow cow cow cow cow", the cow notes clearer, and ^{they} drop in pitch and become longer towards the end of the song. At a distance the initial soft rattle is not audible. I flushed another cuckoo about 100' ^{elevation} ~~alt~~ on the old trail which landed in the open part of a bush, then flew into an open Cordia tree and away into the denser vegetation. None of them would allow me to approach to the range of a .38 pistol. It rained a little on the way up. then stopped. Took a few pictures, a few from spots where I took some earlier (I hope). Got back at noon. After lunch I talked to Dave Cavoneño about the rabbits he brought it. They were taken on the SE part of a volcano called El Chato, which is about 225 meters elevation. The volcano is at the SW part of the island.

DeBenedictis
1964

(159)

Feb 21 Academy Bay, Isla Santa Cruz, Galapagos
The country here was lush and grassy, and ponds were spaced every few feet. Rallies were heard in every pool but all were shy and seldom seen. Cavares said he once flushed a Neoceryx, and never saw Gallinula except for the two collected. John Hendrickson paid \$10 for the 3 birds. Didn't do much in the afternoon except run around in circles trying to find out if I am going to San Cristobal to catch mockingbirds for Dr. Bowman. About 7:30 after I had made a less packed about 3 times, I learned I was cleared to go and got all my gear together. At 8 there was a party at Snow's house and most everyone had a bash. Carpenter showed Mike Caste + family his movie of the islands and I packed for the last time. Up to midnight.

Feb 22 boarded Dave Balfre's Boat about 5:30 A.M.
clear + variable high overcast in the AM., clouding and clearing up periodically during the day. I was so tired I slept until we were almost past Barrington. Sea fairly calm and not much about noted the usual concentrations of O. gracilis fluttering near Academy Bay and scattered Audubon Shearwaters and a couple of distant O. fethys. A few Noddies and Boobies + Frigatebirds. Along the lee side of Barrington there were half a dozen O. gracilis and a few more Audubon Shearwaters. A # of frigatebirds, all which seemed to be magnificens.

DeBenedictis
1964

(163)

Feb 22 Isla Santa Cruz to Isla San Cristobal, Galapagos.
There were large #s of Northern phalaropes, mostly in flight, here; largest flock was about 50 and saw 2-300 birds in all. All were clearly in winter plumage yet at this time. Was able to keep awake most of the crossing from Baiaington to San Cristobal. The waters near Baiaington were populated by the birds mentioned above. O. gracilis was the commonest species, about 2 dozen being observed. As we went further out #s of birds greatly decreased. O. gracilis was rather gradually, but incompletely, replaced by O. tethys and a little beyond halfway across I saw 2 or 3 O. costus. Compared to O. gracilis it is $\frac{1}{4}$ again as large in wingspan, but not much longer. As San Cristobal came in to view spotted a Tropicbird sitting on the water, tail held high. We went through a number of very dirty slicks and in these O. gracilis (and O. tethys a little) and small (mostly single) numbers of Audubon shearwaters were feeding. The petrels were patrolling along the slick; the tail is widely spread and the wings are almost motionless when they do this. The Audubon shearwaters sat on the water and 2 or 3 dove when we approached, surfaced and flew away. Saw several dive-fly conflicts - the bird sat with wings folded, held over the back and peered under the water repeatedly as we approached, and then usually flew off as we got nearer. Close to San

DeBenedictis
1967

(161)

Feb 22 Wreck Bay, Isla San Cristobal, Galapagos.
Cristobal the pelagic birds disappeared almost entirely. Saw Masked Booby, Frigatebirds, Blue-footed Boobies, Brown Noddies, + Brown Pelicans in that order of Abundance. The island is high, with several obvious volcanic cones, and very green, covered with trees and very little rock shows. Can see almost no coasts. We got ashore after dark and couldn't see much. Saw one Phylloclastus in town but no others. No bats.

Feb 23. Woke up at dawn. Lots of Yellow warblers and G. fuliginosa song, almost nothing else. We are staying in two unfurnished rooms in the naval station at Wreck Bay, which were hot and mosquito filled at night, very uncomfortable. Didn't get much sleep again. In the A.M. saw one monkey in the distance. Checked a small pool near the beach but only one Semipalmated Plover and one Sandpiper. Shortly after breakfast we boarded a Navy truck and went up to Progreso; 1000', about 4 miles ENE of Wreck Bay. The trip up was quite rough, although the road is by far the best in the islands and about 15 Ecuadorian children came along for the ride (they had to get off c. 1/4 mile out of Progreso). The vegetation was very green, and all trees with only a little Cereus cacti near Wreck Bay. It was cloudy and rained a little in Progreso. Saw a couple of monkeys, Geospizas, Myiarchus and 1 Pyrocephalus.

DeBenedictis
1964

162

Feb 23 Wreck Bay, Isla San Cristobal, Galapagos.
on the trip up. Near Progreso there is much century
plant which seems to be cultivated, and above
Progreso almost all the vegetation is guava.
I took one cage and a net c. 1/2 mile above
Progreso but soon found that the birds I was
looking for were non-existent. The terrain
was wet, much water on the vegetation which was
dense guava 10-20 ft. high, with a little
grass and flowering plants below. Certhidea was
quite common in this and I saw scattered
Yellow Warblers, G. fuliginosa, 1 Camachyrus
peruviana and a pair of Nesomimus. It looks like
a Santa Cruz bird with a few streakings on the
breast and a less distinct auricular patch in-
spite of the name melanotis. I fussed around
here for about an hour, and then with the help
of Ito, took everything down to Progreso,
whence we got a ride in the mission jeep to
Wreck Bay. Saw a # of Myiarchus on the way
down. We got to Wreck Bay about noon, ate lunch
and then turned around and walked back
up to Progreso. The town of Wreck Bay extends to a small
but steep hill, and then more or less native vegetation
extends the rest of the way up. Near Wreck Bay this is
a Cordia forest which is now well in leaf and thickly
grown to grass and herbs below. G. fuliginosa +
G. fortis are the commonest birds in this forest but saw

Feb 23 Wreck Bay, Isla San Cristobal, Galapagos.
2 or 3 Myiarchus, a couple of Pairs of Nesomimus.
Collected a singing ♂ Ceetospius here. It is much
deeper voiced than the Santa Cruz form. The song is
much like a soft Cuckoo like song. "chun chun
chun chun", very deep. The deepness is the best
way to tell it from Camachyruces song. I saw one
other on the way up, near the top of the Cuelica,
which gives way to a forest which extends
nearly 2/3's the way to Proguisson. The same birds
as below occur here + Ceethides. Nesomimus
and Myiarchus are common here and it was
in this I saw the Pyrocephalus in the A.M. An
Aeschnid dragonfly + the Libellulid species we saw
on Fernandina were fairly common along the Path,
and the sulfur butterfly, Phoebis, was common in
a low, orange-flowered begonia along the Path. Saw
2 Vanessa ^{orange} ~~cattle~~ and a number of Blue (Lycenides)
(H. isola?) and a Urbanus skipper. There were 10±
Queens, Danais bernice, along the path (which
has not been reported from the islands according to Dr.
Vainger) and a lot of bright yellow + black wasps.
Moths were common + saw Myiarchus chasing them.
Above the forest Oranges (scattered fruit trees) and
Mangrove trees become more and more common;
lichens hang from the trees like Spanish moss and
moss ferns are frequent. Cultivated Agave is frequent
here. The 2 Geospiza becomes less common, while


Feb 23 Week Bay, Isla San Cristobal, Galapagos.

Ceithidea and Camarkynchus increase in #s; the latter makes maximal #s ⁱⁿ the forest below, while Ceithidea is common above. Myiarchus piles out here, while warblers follow the same pattern as Camarkynchus. Platyspiza were scattered in this forest and the zone below, not nearly as common as in Santa Cruz; Cactospiza is at maximal #s at the top of the Cordia forest. Found a few polypores with Ciid beetles about 1/4 mile out of Progreso. They were on a dead branch on a patch of cleared ground. (Prob. ~~Anava~~). The Ceithidea I took were a mated pair, and both bled badly when shot. The ♀ had a 1/2" long and a 3/4" long, green lepidopteran caterpillar in the gullet. They were in a patch of fairly dense native forest. The song of this species is quite variable ^{and} ~~although~~ somewhat more zipped than Santa Cruz birds. Quite Dendroica like. The "Parula" song ^(see /) is ^{very} infrequent, and the "che cha cha cha" is not very common. "Peep", buzzes, and a Dendroica-like and a Camarkynchus like song are much more frequent. It and Platyspiza were the only "tree" finches I saw less than c. 10 ft. up with any regularity. The ♀ ovary had a ^{large} ~~large~~ 3 mm, 2 orange 2 mm, and 2 white 2 mm. ova plus several 1 mm. ova. The ♂ testis were white and firm. Shot a Camarkynchus here but stepped on it and ruined it. The pair I took were in the middle forest area, the ♂ gathering, nest material and singing.

Feb 23

Wreck Bay, Isla San Cristobal, Galapagos.
Vigorously. The song, as is typical here, was spaced
----- of mono tone notes, although one ^{other}
bird gave two syllabled phrase constantly. The ♀ also
had a $3/4$ " long, green caterpillar in its gullet. The
4 mm. ova was orange, and the other ova were all less than
 $2\frac{1}{2}$ mm. in diameter, only 2 or 3 orange, the rest white.
Male testis white. I saw only 1 or two dark headed
♂s of the 10[±] or so Comantophanes I noted, a lower
percentage than at Santa Cruz. It doesn't look as
different as does the Ceotospiza, although it may be
larger billed. Got another Ceotospiza further down
and heard ⁵⁻⁶ ~~10~~ more singing. Saw one gathering nest
material. Most of the geospizine nests I saw were made
of grass and lichen and placed 15-20 ft up in trees,
in the lower canopy (leached). Got a bloody Meso-
minus just below where I took the Ceotospiza. The
cuck and what little song I heard is much like the
Santa Cruz birds: foraging behavior very closely resem-
bles that species. Seemed to be red-eyed and has
blue-grey feet with yellow pads in life. The Co-
~~forty~~ here are very deep songed, and all have large
bills. Fuliginosa is a long billed form with 2 or 3
distinct tone of song. Didn't see any other Geospizine.
In town there is a small pop. of Rock doves, and
Frigate birds (magnificens) may be seen soaring
far inland. Cows and pigs roam the ^{road} ~~path~~ freely.
Tropidurus were fairly common in the Craida down but

Feb 23 Wreck Bay, Isla San Cristobal, Galapagos.
quite way. The ♂ is grey-green, striped like Santa Cruz
♀s, and the ♀ is a browner color of the same type,
fairly red on the head and reminiscent of the Hood
form. Saw one ♂ chase a ♀ who assumed the
stiff legged tail up (+ around) ejection posture (the
function like C. Carpenter). The ♂ did not copulate
+ the two lizards soon parted. The ♂ bob is quite
complex, but seems to be something like the below:

height ↑  not quite one of the 1st
time → low + the # of final low
bobs, but something like

this is clearly indicated. When I got back to Wreck
Bay an Ecuadorian showed me a black lizard he had
found on some large trees in the center of town. These
proved to be Gonatodes! The (♂) is black with a
zig zag yellow ventral stripes and yellow mottling
on the head. The (♀) is grey, with the same pattern
indicated in light and dark. They ran into deep
fissures in the rock when I approached and I could
not catch any. Saw them c. 5 P.M. Spent the
rest of the evening skinning. After dinner we
talked to ~~Jacob~~ ^{Jacob} Iruand who lives (periodically)
in Wreck Bay. He said he had last seen Tortoise
in 1932 (a few) and believed they may still be in
extant in the NE part of the island. Feral goats
and pigs are not common here, as they are heavily
hunted and do not do much to the vegetation.

DeBenedictis
1964

(167)

Feb 23

Wreck Bay, Isla San Cristobal, Galapagos.

Feral donkeys he says are the main problem. The Ecuadorians allow their animals to run free, because if they pen them, the pigs ruin the pens. Recently an ordinance requiring the pigs to be penned has been passed and when this is done then an ordinance requiring larger animals to be penned in will be passed. The major damage to the highland vegetation has been the guava (cultivated) which has replaced almost everything. He has not seen or heard rails on the island but has not tried. Finished skinning at 12:30 and could hardly see straight. Field notes will have to wait until tomorrow A.M.

Feb 24.

Woke up early. Spent the early A.M. skeletonizing the monkeys and the G. fortis, writing field notes and then went out to try to catch some monkeys. We decided to sail back to Santa Cruz tonight, leaving c. 10 P.M. It was rather hot as I carried the net poles, net etc. out. I struggled out c. 1 mile along the road, after checking for Gonotodes (saw none), where a water seep appeared along the right (going to Progreso-past the 1st abrupt cinder cone). Here I heard Monkeys singing off in the distance and went charging off to set up for them. The ground was densely covered by low vegetation and the soil and lava were barely visible. I was in very open Bursaria, inhabited by Crotophaga and Trochilurus, which disappear

Feb 24

Wreck Bay, Isla San Cristobal, Colapagos.
under the bushes whenever I came near. I located
3 singing birds and set up near one. This quickly
proved to be a mistake and I moved the net
to the middle of the area it was occupying;
A Myiarchus, the mocker, and several G. fortis
were absolutely fascinated as I set up the net
but soon disappeared. I could not chase the
mocker within 25 feet of the net. Eventually all
the commotion drew 2 others by, but they were
just as scary. The mockers spent all the time
10-15' up in the trees and when they flushed
they flew through the open branches, just below
the leaves and above my net. Thoroughly frust-
rated, I shot one of the mockers and moved to
another pair which were in a large grove of
manzanillo trees and set up the net, placing
the dead mocker near or in the net and
then made mocker like signs. As before when
I set up the mockers (3) were fascinated but
disappeared when I got the net up. G. fortis +
a Platyspiza came to my mocker imitations;
the Neonotus spent most of its hour here
singing from a perch 30' up in the tree and
only once was within 20 ft. of the net; never
saw more than 1 of this. A Yellow Warbler
flew into the net and the Platyspiza and a
Camarhynchus had a good time zipping back and

Feb 24

Wreck Bay, Isla San Cristobal, Galapagos.
forth over the top stumped; they appeared to be very
interested in the dead Neosomus but wouldn't
go near it. I gave up here and took everything
(except my binoculars) back to the road, located
another bird singing and this time cleared it
first to see where it was hanging out. This was
a dense Bursera grove, full of finches, so I set
up here, left the dead monkey in the net &
went back to Wreck Bay (at this time discovered
the binoculars were gone). I then ate lunch - a
^{fruit} ~~soft~~ drink, tamarindo, sold at a "cafe" here ^{got me} ~~liked~~
through the afternoon and about 1 I went up
to check the net & get my binoculars. No birds,
not even any near the net; missed a few of the
local Tropidurus and got my binoculars back.
Went back in and packed to go back in the evening;
but the skeletons in a small C-rat-on box, & everything
else in a large box, then went up to shoot some birds
& take the net ~~up~~ ^{down}. Saw 6 Gonatodes in the trees
about 3:30 P.M.. They would dash to a crevice in
the bark when I was c. 3 ft away (this was the
closest I could see them) and then when I moved
the noose in they would run up behind the bark
into some large hollow space there; a small
crowd of Ecuadorian children around didn't
help any! I suspect that they could be caught more
obtusively by taking flypaper to the tree, but one

Feb 24 Isla San Cristobal to Isla Santa Cruz, Galapagos.
would get a lot of cockroaches as well. As before there
was nothing in the net. I took a ♂ of one pair
and the ♀ of another pair of *Nesomimus* c.
100 yards above the net along the road in
the *Bursera* forest. I saw birds feeding on ~~back~~
insects up in the trees, 15-25 ft. up, 4 or 5 times;
the only Mocker I saw low was on the road. Saw
one mocker singing from a telegraph pole in the
open but most of the others sang from less exposed
places. The eyes of the ~~birds were~~ ^{birds were} ochraceous brown, the
legs & feet bluish grey, dark, the feet pads pale ochraceous.
The bill is the same color as the legs, a darker. It
rained quite heavily at this time, and the birds,
the net, and myself got soaked. Cool back down
and waited for the rain to stop (which it did
after half an hour or so [c. 5]), then did all my
final packing and boarded Dave Balfour's boat.
We passed around for a while, and after dinner we
set off for Santa Cruz. People slept on various spots
below & on the deck and Balfour's cats had a ball!

Feb. 25 Woke up the next A.M. in Academy Bay to see one
of his cats playing with a C-section toy. To my horror
I spotted a skull tag on the floor and the remains
of the fox's skeleton in the cat's jaws. Since there
wasn't much I could do, I left the remains for the
cat. ~~This~~ ^{At this} ~~was~~ merely sewed to what the cat's appetite
for they went out of their minds when I took the

Feb 25


Academy Bay, Isla Santa Cruz, Galapagos.
movers out of Baffoe's freezer. These survived. I got in, and after breakfast put up the movers. Found dermestids in a few skins and chrysomelids and flyis in the ~~foot locker~~ ^{foot locker}. Packed everything up and sprayed the skins with D.D.T.. Spent the rest of the day running around in circles and packing - didn't do a heck of a lot except get packed with a certain degree of finality. The evening was rather interesting - watching Bill & Bowman trying to stuff their gear in their "jillions" of foot lockers (some never opened!). The ladies were flown off the island to Guayaquil this afternoon (from Baltra). Found out Schuster has been recording all the wild comment in the lab - has delighted to spread black mail almost everyone. Sure glad I was out in the field. The DDT seems to have pretty well slowed down the bugs in the skins. Wrapped each skeleton separately in newspaper & put the whole mess in a wooden box to ship back - a thriving dermestid colony. Kiester and Hendrickson got back from the sea turtle hunt - they find there are two very different forms here, a light and a dark one but only got the dark one. Pyle came back from the highlands & he saw 3 Neocoma, flushing from the grass 30' or ahead of him. All the gear is down and everyone




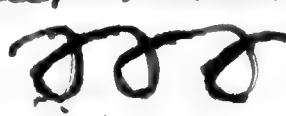
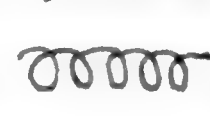
Feb 25 Academy Bay, Isla Santa Cruz, Galapagos.
working like madmen to get it together. Stebbins
& Pappenfuss collecting like mad. Took our
tent down to pack it and had to sleep in the
open: Miquitos ~~and~~ ^{not to} but said no rain to
speak ~~of~~ ^{of} thankfully.

Feb 26. In the A.M. continued packing, trying desperately
to get our junk on the dock so that it could be
boarded on the "Golden Bear". Our instructions
were to mark off the boxes for Valley's & San Diego,
but most of this was ignored. Dr. Miller's tarp has
disappeared from the lower bodega, but the ammo
can is still there. ^{Kiester + I} ~~the~~ disposed Paul Koford
and took down his tent, and moved a lot of gar-
bage around the station. A # of people still trying
to pack. After lunch we were all on the dock
getting things organized (leading to the confusion)
when Betsy Cutler, Mrs. McKay, and Bill Kuschel
returned from Batha - the Ecuadorian plane
they were supposed to catch at 7 ^{A.M.} ~~last~~ ^{last}
night. However in spite of everything, almost all of
the gear ended up on the dock by 5 P.M. and
we had some delightful beer sessions around
the station in the afternoon. Dr. Martin was
called out on an emergency, only to discover
his gear was out on the Ecuadorian LST. However he
must have managed for he was gone the next
morning.



Feb 27.

Academy Bay, Isla Santa Cruz, Galapagos.

shortly after waking up I received news the "Golden Bear" was in. After breakfast we could hear her dropping anchor and set out on our organized fashion to load ~~all~~ on 25⁺ tons of gear. Dieter and I were assigned to load Bowman's & Cohen's half ton of personal gear in the main room, a task which proceeded with much difficulty, for ~~someone~~ neglected to give us a key to the main room. We left a delightful pile in the middle of the berthing area. I was on the boat from 10 A.M. to about 1:30, and made two trips out in the A.M. Oceanites gracilis were abundant in the bay. On the 1st run out we went through a flock of c. 40 which were feeding in the low patrolling fashion in an area about 30 feet square. There were about 30 of them and at least one Oceanodroma leucogaster around the "Golden Bear" most of the time I was out. The gracilis fed low over the water, flying into the wind with a sort of circular motion of the wing, shallow wing beat like a fluttering cliff swallow, about 6-15 inches off the water. They moved 25 to 100⁺ feet, slipping to the water, wings held out & slightly up  tail fanned, the feet dropped and walking with the legs alternating. Just under the water, the rest of the bird out. They moved forward without moving or with only 1 to 5 wing beats, widely and irregularly spaced.

Feb 27 Academy Bay, Isla Santa Cruz, Galapagos.
and stretched the neck forward and down so that
the bill, often just the tip, went under water. I
could see no evidence of surface organisms
even when the birds were quite close. After
completing a run they would rise up, with the
further flight, either move on and repeat, or
circle back with a slightly slower wing beat,
of the same form. The stoops seemed to be about
, and the tail was normally closed except
as the birds flew. When the birds were going ^{into} ~~the~~
~~the wind~~ the legs were dropped  frequently, espec-
ially before feeding; coming back the legs were
again ^{against} the tail and often hard to see. In feeding
they were  like this, almost straight down.
The white belly were very difficult to see, usually
only when the birds turned. Birds feed "solitarily"
(= spaced 5 to 15 ft. apart) for the most part,
but sometimes closer and often one bird closely
followed the path of another. Once saw one appear
to "supplant" another, without posturing or aggression.
Compared to the terebys they were smaller, with
shorter rounded wings, and a lighter black-brown,
with a much ^{narrower} ~~more~~ tail band. The terebys flew
2-3 ft off the water, seldom going down, and with
a slower wingbeat showing a different motion than
the Oceanites,  instead of  motion
of the tip, ^{perhaps with} ~~with a~~ a barely perceptible pause at the

Feb 27

Academy Bay, Isla Santa Cruz, Galapagos.
bottom of the wing stroke, although the action looks quite smooth. The difference in flight is very striking to me although I find it almost impossible to state the ^{exact} nature of the difference. The tethys did much less feeding than the gracilis; a couple of times it dropped down on the water, then got up and flew off and Bob Pyle and I spent 2 or 3 minutes watching it patter in the Oceanic fashion. It hovered low over the water, wings out and tail ~~spread~~ ^{spread}, feet + legs down with only the feet in the water. The bird took food by picking it out of the water, placing only the bill under. It was not as proficient as the gracilis and flights were only 1-5 seconds (instead of 10-30 seconds) long, and were followed by much longer flights in between. Some of the gracilis were clearly circling while the path of the tethys was more erratic. The tail band was very marked, 2x as wide as the black tip, and sometimes appeared slightly divided at the distal end  but usually more rounded. The tethys appeared to be in high plumage while ^{most} of the gracilis were in ~~heavy~~ ^{obvious} wing and tail molt, appearing very worn. A Sooty gull came out to the boat area while, circled and went back. After 1:30 went back to the station. Saw a Sooty gull give the final part of the "long call" in flight, the head  as in the diagram.

Feb 27.

Academy Bay, Isla Santa Cruz, Galapagos.
spent the last of the afternoon talking to ^{some} mid-
shipmen. Some of them were quite disappointed,
others had a ball. Most thought Tahiti was a
beautiful place. In the evening boarded the
"Bear" for the night. After dinner we saw a
movie "Fastest Gun in the West" ~~and then~~ ^{which was} well
~~appreciated~~ ^{appreciated} by the midshipmen - the movie must
have used most of the clichés possible. Spent the
evening writing notes and went to bed. Our evening
snacks of the trip down have been eliminated -
damn. Hot today and in the bathing area. Sailed
at 1700 tomorrow for Guayaquil.

Feb 28

spent the night on the boat. Not but I slept
very well. Couldn't get off until about 9:30.
Very few birds around when I got up; by 8:30
a couple of *O. griseus* were present + a few
Boobies, Pelicans, + Frigatebirds. The Oceanitids
increased to 10-20 during the A.M. The "Bear's"
hiberty launch motor broke down so there was a
lot of small boat traffic, and this may have
reduced the # of petrels in the bay. I got a ride
to the station and from there hiked to Pozo del
Diablo with Bob Pyle. The hike was a/ops, for
there was only a whimbrel and a tattler along the
coast + some Herons and one Sooty Gull in the
largest pond. Took a couple of pictures of the
pond from which Dr. Miller shot the teal.

DeBenedictis
1967

(177)

Feb 28

Academy Bay, Isla Santa Cruz, Galapagos.
Spent the rest of the A.M. Helping John Henderson
^{copy} ~~total~~ David Snow's tortoise records. After lunch
I tried to get a ride back to the "Bear" but did
not succeed until 2:30, when I went back
with Steve Billet, who had been ashore helping
pack Borman's live birds. We saw only 8-10
petrels coming in and few after, all O. gravis.
They fed all by pattern, along the surface with
the feet down, wings open and slightly up; tail
spread; usually not the whole foot appeared
to be in the water and the legs appeared to
dangle. They pattered into the wind, picking up
food with their bill, the bill only going beneath
the surface. As yet no day, no visible surface
organisms. Some of the petrels held their wings
out and glided, while others flapped very slowly,
so that it was easy to count wing strokes (? 2-5 sec),
but without a clock I could not time them. The circular
mode of feeding was very evident. Whatever they were
taking must have been common, for the bill went in
every 1/2 second or so and the birds usually worked
in assemblages of 8 to 15±5 birds, often 2-3 feet
apart. Saw no other procellariiform birds. Didn't
get much done in the afternoon - read Steven's
log of the Academy and said good by to everyone.
Sailed for Guayaquil at 1800 and were to
Barrington Bay 1900. Watched the crew movie

Feb 28 on board "Golden Bear" Galapagos to Guanajuato, Ensenada.
The Mating Game in the evening and hit the
sack about 10. Hope the birds are good the next
few days. best photo of the island was the
station from the "Bear"

Feb 29. Got up about 6 A.M. we are well out of the
Galapagos, going in to the trades and although it
is sunny, it is remarkably cool. Cloudy in the
A.M., clearing up almost completely. Very few birds
around. Between 6:10 + about 7 I saw one white-
rumped Oceanodroma far off from the bow; nothing
following the boat. After breakfast I watched
for about an hour and a half, but saw only a
few birds. Used the ship's watch belt for a clock.
7:30 to 8 A.M. saw one O. tethys and 1 O. castro;
both with clear white rump and the castro with
a slower wing beat. A school of about 30 of the
large (12-18 ft.) dark olive porpoises appeared far
off the boat and did not come in close. Between
8:00 + 8:30 saw another O. castro and a ~~Masked~~
Booby, in flight. A school of 30-50 small (6-8 ft.)
porpoise were jumping off the bow, far out and did
not come in. They were dark olive, paler on the
head and flanks, this color sharply set off, and no
markings obvious on the fins. Not sure of the head
shape. diagram of the pattern



DeBenedictis
1964

1979

Feb 28 on board "Golden Bear", Galapagos to Guayaquil, Ecuador
between 8:30 and 9 saw another O. castro and
a Masked Booby, the latter flying rapidly in
the direction of the Galapagos. At this time I
quit and went to the bunking area and slept to
about 10:30, duplicating in more ways than one
the old symposia routine. About a quarter to
11 there was an announcement of a whale
on the port side and everyone rushed over to
see two Sperm Whales. They were only partly
out of the water, producing a low diffuse spout.
The color was dark greyish, and the forehead
steep, the dorsal fin long, low and rounded.
Never saw the flukes. What we could see was:



15-20 ft. long. The dove for 3-4 seconds at a time
and appeared to be traveling along the surface. I
went to the stern to find about 30 Oceanodroma
tithys following the boat, most of them
way back. Saw one dive into the water from a
height of 3-5 ft., producing a noticeable splash.
2 or 3 others dropped to the surface where they
appeared to settle lightly on the surface for half
a second. They soon became interested in garbage
being thrown overboard and dropped off. At
lunch and began a noon watch about noon.
Four O. tithys were following the ship when a larger

1964

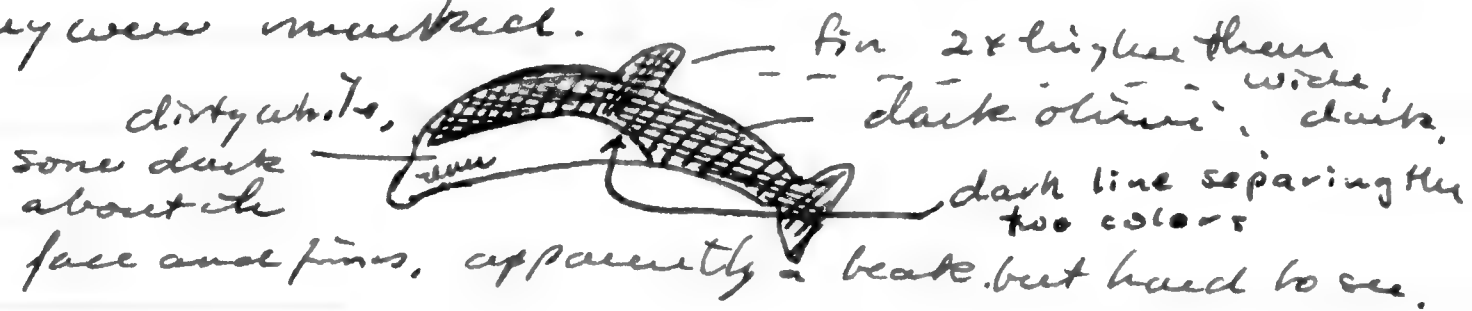
(80)

Feb 29

on board "Golden Bear", Galapagos to Guayaquil, Ecuador
 (1/8 again as big) white-rumped Oceanodroma (Costa)
 with a much slower wingbeat, the wings going lower
 before the body, went past, paying no attention
 to the ship. I saw 6 O. tethys from the bow, 2 to-
 gether and 4 far off, barely in binocular range,
 flying more or less parallel to the boat between
 12:15 and 12:30. Between 12:30 and 1 saw
 one more white-rumped Oceanodroma and
 a yellow-olive colored Green Turtle floating
 on the surface, swimming slowly. It was about
 4 ft. long, and did not swim as the "Bear" went
 past. About 1 we came on a Red-billed
 tropicbird sitting on the water, the long tail
 plumes horizontal, floating on the surface.
 As the bear approached it paddled off, making
 no attempt to keep the tail plumes out of the water,
 but could not get up. paddle with the feet and
 wing tips hit the water. After going about 25 feet,
 it sat down, dropped a 12 inch fish, and then
 flew off after paddling only 2 or 3 feet. Between 1 and
 1:30 there was nothing. We had a lifeboat
 drill after this; saw a ^{couple} ~~couple~~ of O. tethys which
 were apparently leaving the boat. The "Bear" slowed
 down for about 1 1/2 hours during the drill, then
 went off. Got a haircut from one of the crew (\$1),
 and about 3:30 went out for a final watch. I got
 out to see 2 Oceanodroma tethys in front of the

Feb 29

on board "Golden Bear" Galapagos to Guayaquil, Ecuador
bow but only 1 Masked Booby, floating on what
appeared to be a water-logged board, was seen
to 4 P.M. Between 4: and 4:30 ~~6-8~~ 10-15 small
(8-8 ft.) porpoise came quite close to the ship.
They were mackerel.



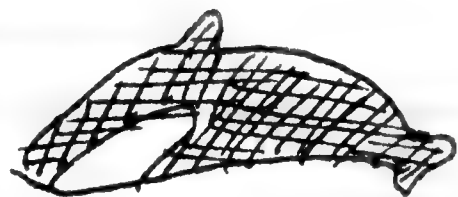
They were leaping completely out of the water and
falling down on their sides, making a high
splash and audible over the boat + wind at
75 kts. One came very close to the ship but
did not play in the bow wake, and after a few
minutes left the ship. May have been the
same small porpoise I saw this A.M. No birds
with this group; a petrel was with each of the
groups seen in the A.M. and a ^{the} Booby was with the
large olive porpoise. Saw another Masked Booby
sitting on the ocean between 4:30 and 5, when I
quit. Went to the stern to find 10± small Ocean-
odroma (tethys) following the boat and at least
2 larger petrels with them. One had a white
rump and was only a little larger, with not much
different wing beat (a little slower) and I took
this to be castro. The other was all black and
1½ times as large as the castro, with a much
slower, jerkier (pause between strokes longer) wing

Feb 29

on board "Golden Bear", Galapagos to Guayaquil, ^{Ensenada}
beat and a clearly forked tail, this either L. melanura or O. markhami. They soon dropped far back off the stern to investigate some boxes thrown over and not until about 5:45 did a couple of small Oceanodroma which looked all black (in to the sun) appeared, soon to disappear leaving no birds at night. Most everyone tired and a little bored after the real climax of loading. Lots of flying fish, mostly a small clear "winged" one, some with dark wings and larger. Numerous 1 1/2 ft. diameters phosphorescent jellyfish in the wake about 7 P.M. Total birds for today: 5 species: ⁵⁰ ~~50~~ petrels (~~not~~ all O. leucorhynchus except 5 O. castro, 1 dark nump, 2-3 Oceanodroma sp.); 4 Masked Boobies (all pink = Galapagos bird color type); 1 Tropic bird. Hope tomorrow will be better.


March 1

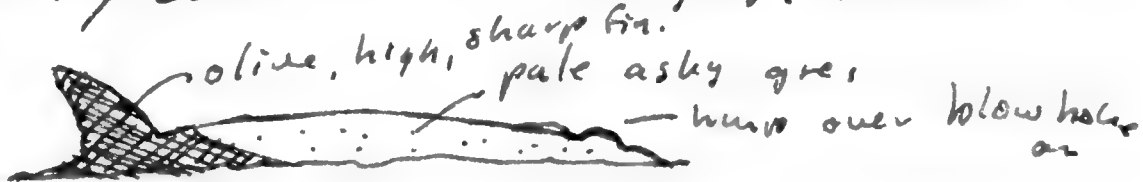
woke up about 5:30 and by 6 was out on the bow looking for birds. It was overcast and windy, so cool I had to put on a jacket. Saw nothing until between 6:30 and 7, when a school of 50[±] 10 to 15 ft. dolphins marked, as well as I could determine




not sure of the snout, dorsal fin tail and not absolutely clear on the shape of the white mark. A Red-billed Tropic

March 1

on board "Golden Bear" Galapagos to Guayaquil, Ecuador
bird appeared before the boat shortly after this
After breakfast saw 2 petrels in the wake, both
of which soon disappeared. Between 8 and 9
I saw only a group of 8 and 12 small
porpoises ~~with~~ ^{with} a high dorsal fin and a pale
head and flukes: . There were seen
before 8:30. Quit after them and went in until
10, then out to the bow and fell asleep. Woke
up c. 10:30 when the coxswain pointed out a short
tailed Red billed Tropicbird flying over the
boat and saw 2 Oceanodroma talys, together
in front of the bow about 11. Nothing from
11 to 11:30, then ate lunch. At noon there
were a large dark rumped petrel and a
? O. caesia following the boat. From the bow
saw 15+ greyish, apparently unmarked porpoise
with a high sickle-shaped dorsal fin. The tail
was also very long. Shortly after a whale 25-30 ft
long, which did not blow appeared off the bow
and came fairly close in (100-150 ft.). Two
marked:



The flukes never came out + were dark. From
nearby on top it had a broad pointed head like
a baleen whale, and pale  (chown
shows
only at angle)

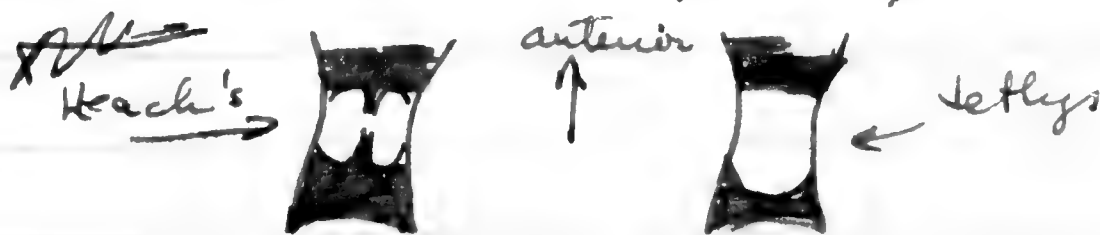
About 1 (nothing in between: 1/2 hour) a whale

DeBenedictis
1964

184

1 March

on board "Golden Bear", Galapagos to Cruzaguit, Ecuador
appeared off the bow and 4 others to the starboard
side, all together. They came high out of the
water, showing the square snout & low dorsal
fin of the Spume whale. ^{2 or 3} ~~about~~ appeared
to be about 50 feet long and the others were
not much smaller. At this time we had a
man-overboard drill which slowed us up
for the next hour or so. We circled back to
our garbage (while the whales quickly disap-
peared) where I was able to see 3-5 Oceanodroma
tethys and 1 or 2 large dark petrels. They
have the slow wing beat of Black Petrel and
do not appear very long tailed; I suspect they are
hoemelania. Quit at 11:40. We took the
boat 2 to 3 P.M. by crossing a timer zone line,
and I did not get out until about 10 to 4.
There were 2 O. tethys and about 10 Black
Petrels following the boat. Watched from the bow
thru after. 4 to 4:30 I saw a Black Petrel and
~~period last period~~ ^{2 Oceanodroma} following one of the slicks paral-
lel to the "Bear" at binocular range. Between 4:30
and 5 within a 2 minute period (the birds one
at a time) I saw 1 Leach's Petrel and 2 O.
tethys. The wing-markings were quite different



1964

(136)

1 March on board "Golden Bear", Galapagos to Guayaquil, Ecuador but there seemed to be no difference in size or flight between the two species, nor did I see any other differences. The double indistinctness of the patch of the head's was quite marked, and no small Oceanodroma I saw had as much black on the tail tip. Went to the stern to see 15+ Black Petrels and 2 or 3 smaller Oceanodroma following the boat, all at over 300 ft as has been the rule. Most are way off, barely visible in binoculars. Went again to the Bow, after seeing about 30 of a medium-large grey porpoise and a few petrels heading towards the bow. Between 5 and 5:30 saw 4 Black Petrels, 7 white-rumped Oceanodroma (which seemed to be 3 Castro by slow flight) and 4 tethys by faster flight), a dark-rumped Oceanodroma with the flight of and prob. the size of O. tethys or castro, dark under the wings, and not with any other petrel. Not sure what this is. Can't see the tail well; the wing beat is fast, almost no pause between strokes and quite high, and the bird goes quite high ^(4-5 ft) off the water. The "Bear" flushed a Phalarope which sounded like a Red but could have been Northern; the wind and engine may have distorted what I heard. Between 5:30 and 6 saw 3 Northern Phalaropes (2 at once), 2 Black Petrels, 3 white-rumped Oceanodroma

DeBenedictis
1969

(187)

1 March

(prob. tethys) and 2 more of the dark unmarked form. It seems the same as before and is always well off from the ship. Following are about 15-20 Black Petrels. Saw a Black Petrel and 2 tethys, which seemed to flush from the water, in a couple of minutes after dinner, and then and 20-25 Black Petrels but only 1 or 2 Oceanodroma following the ship, if any. The Black Petrels are coming much closer, but it is too dark to see much on them. This is much like the pattern they showed on the tip down, coming in at night. A Masked Booby adult came by the ship at this time, and little after that was to be seen. There were flying fish and various large types trailing surface all day long, and large brown "fish" (= ? sharks), and I saw 1 small mackerel-type (3' long). None of the ~~birds~~ ^{porpoises} seen. - Gad birds accompanying them. There were two main types of flying fish, a large brown fin and a smaller clear fin, the latter more common, and the fish were in small flocks, all. Don't know when we are getting in Guayaquil, but the midshipman said Capt. Bowman likes to arrive at 8 and leave at 6. Got ship position from Pyle. Saw 2 movies in the evening + went to bed.

2 March

In the A.M. we were about 5-10 miles off the coast N of the mouth of the River to Guayaquil.

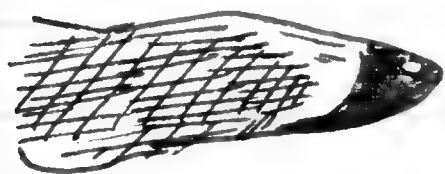
2 March on board "Golden Bear" Guayaquil Port entrance, Ecuador.
It did not get light until about 6:30 but this didn't matter for there was almost nothing around. We saw occ. porpoise surfacing; no fish. The first birds seen were magnificent Frigate birds circling over a Japanese ship awaiting a pilot, and soon after we spotted a Brown Pelican. About 6 laughing Gulls began flying out past the ship and by the time we got under way there were about 150 around the bear, showing all plumages. There were all the species seen for some time, until we were well into the channel. laughing Gulls, Brown Pelicans and Frigate birds followed the boat in the, and several large flocks of ~~frigate birds~~ ^{Brown Pelicans} were seen, up to 200-300 birds in a flock. The border of the channel is mostly mangrove forest but along the ocean there is some scrub forest. ^{From} the bays marking the channel we flushed larger flocks of terns which all proved to be Sandwich Terns. They do not look as tapered as S. elegans but are in wing and tail molt; the bill looks shorter and the yellow tip is hard to see, blending with the sides. There were 15-20 on the first 3 bays, then only 0-3 or 4 on the remaining ones. I also saw one smaller tern out on the water. Saw one small blackish heron flying across the River, and what eventually was a total of 85

1967

(189)

2 March


on board "Colden Bear", Grayaguel Port entrance, ^{Canada}
 White Ibis, in small groups. They fly with the rapid
 wingbeat of Glossy Ibis. I spotted an oddly
 marked gull in the distance and as we went
 up it became more and more numerous until
 we had 15-20 in sight at once. Several adults
 had grey heads showing them to be Larus
circrocephalus. The wing pattern is



above



below

the bill, feet and legs quite bright red, the iris
 yellow; the grey head had a dark port margin;
 in winter ~~the~~ plumage the head has a semi collar
 (nape) and a dark ear spot. I heard 3 calls;
 a high ^{errrrrr}, very rough, a lower, rough
 burrrrrr, and a crow-like "gaw", once given
 from a  posture as " 'gaw 'gaw 'gaw"
 by a bird sitting on the stern flagpole to another
 trying to displace it. About 8 landed in the /wooded
 boom. Two martins of the grey-headed type
 circled the ship for some time. As we went farther in
 we came quite close to the mangroves several times,
 and could see various white or dark dots in the
 trees. I saw a ? Kite, Crowned hawk, rusty headed
 hawk, little ~~stealthed~~ ^{stealthed}, 4 or 5 Ospreys, 2 Turkey
 Vultures, ^{2 or 3} ~~2 or 3~~ (Snowy Egrets) and a Little Blue
 Heron, all poorly. As we got into the port the

DeBenedictis
1964

(190)

2 March on board "Golden Bear", Guayaquil Port Authority, Ecuador.
channel was very narrow and I could hear
Yellow Warblers and one other song. Saw 2
Spotted Sandpipers, a Cassin's Kingbird, a
(Belt-tailed) Grackle (♂), and a ? Green Heron.
At the port the martins were common. They
are black on top, grey breasted, and with an
ashy belly, the colors blending; forehead dark.
Call is a metallic "plink" like a taut wire
being snapped in the ~~wind~~ wind. A Yellow-crowned
Night Heron appeared opposite the ship across
the river. Martins were quite common around the port,
and one was investigating a small hole in a grass line
steamer. Tried to walk out of the port but the
vegetation near by has been cleared and ~~fallen~~ we
did find something - a fog calling - we were attacked
by 1000's of mosquitos causing us to beat a hasty
retreat. Stayed on ship until about 5 when we got
a taxi to Guayaquil. Lots of birds along the road,
2-3 types of flycatchers, a red-br. blackbird, boat
tailed grackle, a small finch and a small blackbird.
Saw an Arre in Guayaquil. In the city Martins and
cliff swallows were abundant and saw a pair of (?)
kingbirds and a couple of small birds in a park.
Lots of bats in the evening, which soon produced a
audible "ticking" sound as they flew overhead. After
some official engagements spent the night on the
"Golden Bear". Port is c. 9 km. S of the city.

3 March Guayaquil to Playas, Guayas Prov., Ecuador.
woke up about 4, went back to sleep to 6:30. Went
out to see what was singing - Bowman's Darwin
Finches, naturally. Nothing but the Cassin's King-
bird and Martins on the river. About 7 I went
with Ted Papenfuss and Pete Whitney to the
town of Playas by cab. We jessed around
Guayaquil for a while then took a good paved
road out. Just outside Guayaquil there is
some fairly extensive second-growth tropical
forest and the magnificent trees in the area
grown to scrub well testify that the area was
once quite green and lush, but is now
all scrub and farm land. There is very little
farming visible from the highway for the most
part, only scattered houses and fields, especially
near Guayaquil. The road is fenced off for almost
its entire length. Birds are numerous here,
mostly flycatchers, and hawks are very scarce,
even Vultures, compared to Mexico. We did not
stop in any of this vegetation but instead went on to
a transition scrub forest, this fairly well intact and
not much settled where we stopped at 2 places,
one about 30 km from Guayaquil on the way out
and another spot c. 60 km. out on the way back.
Both places ~~where~~ ^{were} where a stream went under the
highway, wide enough to merit a bridge. The
1st stop was in vegetation comparable to the lower tran-

3 March Playas, Guayas Prov., Ecuador.

sition zone of Santa Cruz Is.; the vegetation was spaced, of low acacias with occasional higher trees growing solitarily and in clumps, and with occasional patches of grass and low, loose shrubs (legumes mostly) in between. A few "cereus" cactus add to the effect. A comparable place in North America would be the open scrub forest, near Mazatlan, Sinaloa, for example or in the middle level of ~~of~~^{some} of the Arizona canyons. The acacias ran 15-20 ft high, the taller trees twice that. Birch were plentiful here but hard to see. They gave no resemblance to the island fauna at all; pines were non-existent, while "flycatchers" were abundant. The ~~slowness~~ made a great difference in the impression, and the vocabulary was completely different, songs being almost all high buzz songs or low, fast ticking, Tyrannid-type songs, instead of the "titmouse" songs of the islands. I will list the birds later, with notes ~~up to~~^{up to} the other places they were seen. The second locality here we visited very briefly from 4:30 to a little after 5. It was dense, scrubby acacia except for the creek bottom, which was bare, and a few heavy-leaved trees the same height (15-20 ft.) Across the highway there were some very large trees much like those of the jungle a little farther south. Some of the scrub near the seismograph station at Acaelmy Bay is similar to this; a open high willow

De Benedictis
1964

(193)

3 March

Playas, Guayas Prov., Ecuador.

chick is a Calif. equivalent - except that the land is dry. We spent most of the day at the Hotel Humboldt at Playas. The area around the hotel had been cleared, but on the hills there was an acacia scrub in form like a low, open Calif. Chaparral, very dry, and on a red soil. Around the hotel there were large dry areas, and gullies, some with water, in which there were scattered Acacia and (? sp.) trees 20-30 ft high + patches of brush and low plants. Birds were easy to see here due to the lack of cover, and I became familiar with much of the basic fauna of the region here. The ocean here was a populated sandy beach with no birds except at sea; water murky. The soil was quite sandy at this area, and pale colored. From here we went towards a town c. 6-8 km. S on the coast but the dirt road there was so muddy we never made it. We stopped in a low open scrub, trees and low acacia growing in patches with grass and bare soil, salt pan - sand - in between and much of a ridged, long, sharp spined "cactus" cacti. Some of the scrub near Tortuga Bay, or the desert of Arizona grassland country is similar to this. Birds were common here and very hard to see. Little song and doves the most conspicuous part of the avifauna. At all these localities a small Tropicurus, a large

3 March

Playas, Guayas Prov., Ecuador.

checked Ameiva and a smaller striped Teiid of this sort were common but very wary. The Tropidurus looks like and acts somewhat like a Hobbrookia, terrestrial and shy, and the Ameiva are typical Teiids in behavior. Dug a nice big checked one out of a hole in the sand at the Hotel Humboldt. The hole was $1\frac{1}{4}$ - $1\frac{1}{2} \times 1$ " in diameter, 15 inches long and about 6-7 inches deep at the end. Very few of the lizards went down holes; rather they ran to the bush & escaped. The only other lizard was a gecko we found at the Hotel (and the last stop). Ted caught a Boa constrictor at the 1st stop under the bridge. We saw a cloD. R. Iguana c. 20 km. out of Guayaquil on the way back. Saw lots of birds, but not an awfully great variety of species. Only a few water birds, all of which I could identify:

25⁺ Laughing Gulls - in a pool at Playas; none on the beach.

3 Franklin's Gulls - (2) ad, (1) 1st year bird with ^{above} ~~below~~: small size and white pattern on the wing tip clearly contrasting with the adult hangwings, which they most resemble.

25 Larus modestus: all were sitting on two fishing boats anchored off the hotel at Playas. They appeared uniform chocolate brown, with dark bill and legs, and have a

3 March

~~Galapagos~~, Playas, Guayas Prov., Ecuador.

heavier flight than hanging fruits. Same size or larger.

Magnificent Frigatebirds - 100s at both coastal locations

Brown Pelicans - do.

1 Snowy Egret - with the hanging Gulls.

The land birds were much more confusing. A few I was able to identify; for most I must add a description and try latter. Ted shot one bird, which I kept. The better seen species were:

① (specimen #). ♀ brown above, paler below, wing bar, dull orange-red belly and crown; ♂ above uniform velvety purple-blue, dark, red crown, red breast shading to golden orange belly, long pt. bill. 5-6" long. Song a high "chi kigs", very buzzy and the most dominant song at all stops but Playas. The white in the wings does not show in the field and I never saw them in flight. Sleazy and sneaky. Flicks the wing and tail rapidly.

② Yellow-green Vireo - sings like a Red-eye, & pattern the same; yellow under tail very conspicuous. The only bird that really comes to squeaking. Everywhere, not really common, but conspicuous.

③ Vermillion Flycatcher - much redder and with a narrower black face mask than Galapagos birds. Saw a couple of very dull colored ♂s. Never heard wing or tail snap, and didn't see the flight song. The only

3 March

Playas, Guayas Prov., Ecuador

song was a "pit pit pre-ee-eeen pre-ee-eeen pre-ee-eeen" which is what the Cest birds do. Seen at all stops, commonest at the two coastal localities.

- ④ Groove-billed Ani - very common, in small groups at all stops and all along the highway. ♂ display with half spread, drooped wings & spread tail seen frequently. Sounds weird.
- ⑤ Black-vulture - white patches in the wing very conspicuous. only on coast in #s.
- ⑥ Turkey Vulture - not common as the above and more evenly distributed.
- ⑦ Tropical Kingbird - saw only this species for sure, well, at all 4 places, not very common, but easy to find. grey breasted and dark tail. call very high pitched.
- ⑧ Melodious Blackbird - everywhere and common. short bill, dark eye, purple tinge. They call from a tree a cow-bird like see me see and give a bunting like song that constantly confused me when they flushed; perch in trees, feed on ground. seen only at the two coastal places but along the highway everywhere. May be confusing a cowbird with this as well.
- ⑨ Mourning Dove - at the second coastal stop. 15-20 seen.
- ⑩ Yellow Grosbeak - a pair at the last stop on the highway only.

3 March


Playas, Guayas Prov., Ecuador

(the following are down to family, more or less).



- (11) ?Troupal (Icteridae). large black oriole with orange rump and upper wing coverts, blue eye, no frontal shield. Fairly common along the road from the Transition zone to the city of Guayaquil. Solitary pairs only.

- (12) large yellow oriole; black wings and tail, with white tail coverts and upper wing coverts. (? black head). seen only from the car. maybe the same as:

- (13) small yellow oriole; black wings + tail, 2 white wing bars; ? white outer tail feathers (from below), black line from bill to ear. seen at last stop only. back colored?.


- (14) Icterid. - Robin shape. ♂ black with dirty white temporal tail band and red chin, throat and ^{and epullette} breast. ♀ grey, streaked with darker, and paler ^{and epullette} red breast. bill  yellowish in ♀. Song like redwing blackbird. Peterson calls it "military stardis".

- (15) Gratcatcher - pattern like a white-breasted nuthatch; with white on outer tail feathers. seen at all stops but very scarce everywhere, only 1 per place. P.

- (16) Ground dove - primaries dark, white inside this; brown otherwise like Calif. dove, streaked on wing? bill  yellow base, feet pink. Tail black . Seen only on the coast. May be from without the wing band here

3 March


Rhazas, Guayas Prov., Ecuador
as well, plus the following:


- (17) Ground Dove; brown; Gray (pale) head & top of neck; flight feathers color of black, tail longish, squarish-rounded. feet pink, bill bright yellow base. Seen at the 2nd coast (1 only) and last inland (3) stops, very well.
- (18) Mockingbird - dark brown above, pale grayish below and on face. darker (black) mask. Tail with pale terminal band, upper wing coverts all white forming a patch. Songs much like Mesomimus in form. one was a throaty "chee-tee-tee". Seen at all but the 1st stop, and commonest on the coast.
- (19) Cliff Swallow - maybe U.S. species but fore-rump head dark; many with pale throat, a white ~~throat~~ ^{fore-rump} throat. Others with orange throat. Nests are all normal style.
- (20) Martin - same as at port. Swallows seen everywhere but commonest on the coast. Progne
subsp.
- (21) Fringillid. Junco size. Pattern of head at distance like slate-colored junco, close shows:
 . bill yellow, short & stubby as shown. ? brown, paler below. All with 2 wing bands which make a patch like a skin in flight. Two species or plumage as some ♂ have black throat & collar, others
* Saw yellow bill & no wingband; dark bill & wing band but - not sure of this yet. See notes of:

3 March

Playas, Guayas Prov., Ecuador

grey. Short "pick" call note + high "fizz buzz" or "tizz tizz tizz-bizz" or "bitz bew" song, variable, + very buzzy like the song of the specimen, given from perch.

- (22) Seed-eater: pattern like ♂ slate color juncos but head . white wing patch (= 2 white wing bars), and white ^{ump and} tail tip. bill short, stubby, black. ♂. ♀ brown with some face pattern + darker back. Looks yellowish in flight. call note "plink" metallic. elaborate songs given in flight (only?). Last ♂ I saw had a velvety black ~~throat~~ ^{chin}; but may have overlooked it on the others. Seen only on the ~~coast~~ ^{smaller than above}, as the above. Suspect it's more widespread. ~~seen~~

- (23) ? Grassquit. blue black, uniform except for mottled pale grey ^{lower} belly and breast band. long, pointed bill . Only one seen, at the Hotel Humboldt at Playas. size of the above.

- (24) Parrotlet. 6-8" long. short blue (dull) tail, grey back, rest green (dull grass). Head big and the facial feathers conceal the bill like a barn owl. Seen at both coastal stops, mostly at the hotel. a wren-like, melodic song.


- (25) Parrotlet - slightly larger: turquoise-green head, bright (not shiny), dulled belly: ~~green~~ ^{brownish} green back + wing coverts, tail and outer primaries deep blue, inner primaries purplish. Short, small yellow, prominent parrot bill. at 2nd coastal stop only and song like

3 March

Playas, Guayas Prov., Ecuador
the other species.

(26) House Wren - at two coastal stops. No eye mark.
a medium one at the last stop. Sings like Calit.
bird does.

(27) Woodpecker: one at 2nd beach stop. white belly
and ~~face~~, black tail, scarlet (deep) back and crown.
uniform. One at the last stop had a grey crown and
the others there had brown wings. brown many species.
chubby flight. short yellow bill.

(28) "Guan" - black back, pale grey belly, white
sides to tail big, crested  head. seen in flight
from the car.

(29) Myiarchus - at last stop. looked like Wied's
Crested. silent.

(30) Flycatcher - Kingbird size; rufous wings & tail,
not visible in flight, yellow belly, grey head & breast,
brown back, black eye mask. One at Humboldt,
one at last stop way up in a tree.

[? other Kingbird, with white belly, dark back,
yellow (bill) & crown; in flight only, on the way in.]
The remainder are not sure as to family, or ~~seen~~
very poorly.

(31) large black Hawk, long tail, square longish
wings. white rump. tail? - in flight from car.
Vulture size.

large ? uniform rufous eagle. do.

(32) Caracara (sp.) widespread but scarce.

3 March

③ Playas, Guayas Prov., Ecuador.

(Ash thm)

③③

"flycatcher" 7[±] inches. long tail. (normal kingbird shape). Back olive, irregular, checkered wing bars + belly and superciliary yellowish. a dark brown line off setting the auricular region seen only at the 1st stop. silent. (? cotinga). in bushes ^{one} only.



③④

"flycatcher" not a tyrannid prob. a pair. both stocky with a crest like trojan helmet. (♂) black head + triangular breast patch, ~~wing~~, and tail with a white tail tip. belly and collar white, back brown. (♀) tail rufous, brownish where ♂ black, paler, crest whitish like belly. both give a low rough "ummm" call. flicks tail up and down. 10" long. 1st stop only. ~~one~~

③⑤

"furnariid" titmouse size. red brown cap, brown back, short tail, yellow belly, brownish on breast. prob. not identifiable. 1st stop. only. one.

③⑥

"ant bird" grey back and tail, white belly, head + breast marked with black as:



♀ is duller, dark grey


where the ♂ is black. Vireo size and build + action. tail with white "Amer. Redstart mark" only at Hotel Humboldt. 1 pair.

③⑦

"flycatcher" (family?) body ^{peewee} small size. olive, 2 pale yellow wingbars, pale yellow belly, superciliary, breast streaked, on pale grey, auriculars bright. tail 1/2 inch long. legs 3-4" long, strong, pink; bill black,

3 March

Playas. Guayas Prov., Ecuador.

sits on low perches ~~under bushes~~ ^{under bushes} or runs around on the ground. flies when flushed. Saw 4 at Hotel Humboldt only. crazy bird. 
has a dull orange rump.

- (38) "? tanager" small black bird \exists ^(?) (shaped). black beady eye, long tail + neck (stretched out looking) grey with shy (dull) blue wings and tail. One in Acacia trees at Hotel Humboldt. ? Blue-grey tanager. black bird size, shy.

- (39) "wren" "short" bill, white belly, longish rufous tail, brown back + wings, latter with rufous patch in primaries. white face with black streak from bill to ear (through eye). a necklace of short streaks on the breast. common at 2nd coastal stop. found a domed nest in a "cereus" cactus, 6 ft off the ground. Song a short wren song.

- (40) "small flycatcher". rufous crown, brown back pale belly, 2 wing bars, ~~fairly~~ ^{mod.} long tail. skulks in the bushes. Chatters loudly like a kingbird (West.). Saw one with ~~feathers~~ ^{feathers} on the face. a "fernandian"?
Loud little devil, only at 2nd coastal stop.

"grey macaw" 3 flying over calling at last stop. big. long pointed tail.

? Ruddy Ground Dove - on road near Guayaquil on the way back.

Will refer to these by # if they are seen again.
no number means I didn't see it well. Water birds

3 March

Guayaquil, Guayas Prov., Ecuador.

are not included. Saw a few birds not included in this listing, needless to say. a very exciting day. Copied descriptions in field in small note book, then done in the evening. Quite a day. 50+ species.

4 March.

~~Got~~ up early; not much around the boat as yesterday. After breakfast Ashlock, Schuster, Billet and Carpenter and I went to Heinz ^(?) Hirsak's ranch (?) which was just outside of Guayaquil where the road splits to Playas and the coastal mts. We looked at his animals and then went out to the jungle-scrub edge on the hillside near the house. The hills were steep and mosquitos were abundant. The vegetation was quite patchy, prob. cleared and grazed by donkeys and cattle. There were large areas of grass on the hill sides but dense vegetation in the canyons, mostly low tangle that were impossible to get through, with some trees in ^{places} ~~some~~. Tall, buttressed trees stood well above the other vegetation; these trees were fairly open and easy to see into. There was much low acacia and the scrubby was of leguminous and squash like plants which formed dense tangles. The leaves of this plant stick to the trunks like flypaper. Butterflies and dragonflies were very common and many species were present. Saw a couple of Swallowtails and many nymphalids and sulphurs. Lizards were surprising scarce. I saw 2 Anolis and caught a anoliform lizard which I gave to Carpenter until it

4 March

Cuayagundi, Guayas Prov., Ecuador.

clis. He caught 2 others of this, and I got an Iguana at Heing's house. We saw an eluthrodactylid frog there and heard others calling in the valley floor.

Carpenter found a foam nest. The valley floor was all wet and much grown to sedges, grasses and cut tails, with occ. patches of acacia along the road.

Saw lots of birds but was shooting and didn't get to see most of them. Got the grey gnatcatcher (#23) and the seedcatcher (#22) and a parrotlet (? #24).

Steve got an, #11, and an ant shrike and a barbet.

There were black & Turkey vultures, a large black hawk like I saw yesterday, a smaller brown "Butor" with a ^{rufous} head, and black and white banded tail.

Saw only few small birds. A big blue, crested, fan-tailed Cotinga, was in the tail trees. A long tailed green Parrot with orange under wings flew over several times.

A smaller yellow oriole. Gnatcatcher, a ? cuckoo, a black headed, brown bodied, white bellied junc, a small yellow bellied, brown-backed flycatcher, grey head, black mask with white above and below.

Kingbird like a Tropical with an narrow black mask.

Small streaked flycatcher brown ^(above) & white ^(below) with white sides to the tail. Small rail (cuckoo), dark colored.

A bronze colored "robin" with long legs. a red-bellied woodpecker. There were 2 or 3 more species of gnatcatchers which we didn't get.

A midsize belted Kingfisher with prominent white cheeks, a blue & buff belly and

4 March

Guayaquil, Guayas Prov., Ecuador.

gave single "chinks" in flight. We got thoroughly wet and tired and about 4 P.M. we came in and spent the rest of the evening on the "Bear". Going birding tomorrow. Ted Papenfuss & Kiester came in today about midnight with a bunch of frogs and Toads and a few lizards they caught out toward the Andies. They brought in a live yellowthroat which I squeezed. Hope it was frozen.

5 March.

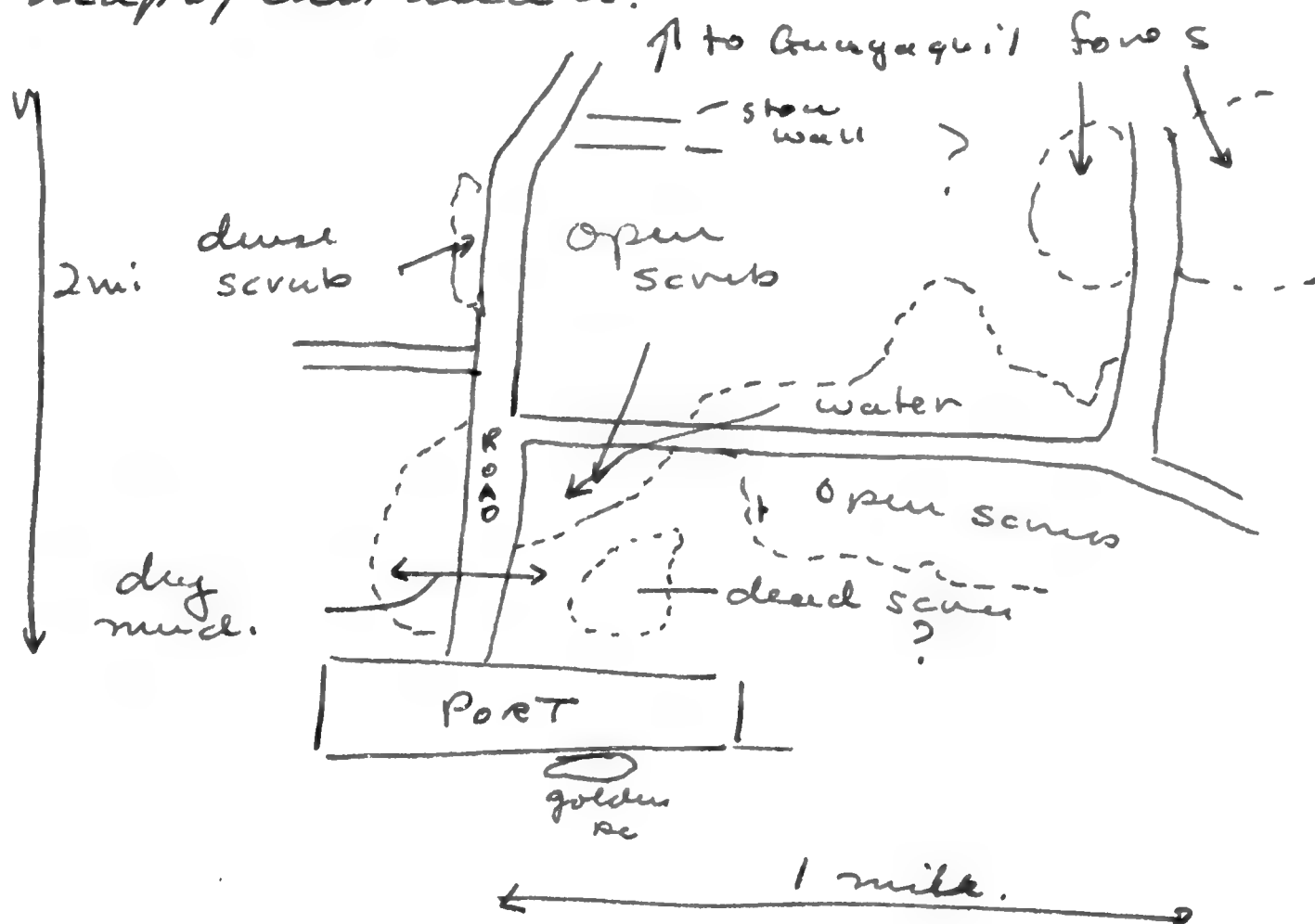
Hot & lots of bugs; didn't sleep too well. Got up about 7 and about 8 started walking towards Guayaquil to look at birds. I had intended to go most of the way but there was so much close at hand I never made it. The area I worked in the morning was open wet scrub. Near the Port there was some water and open mud but mostly the open space was grown to grass, a squash-like vine, and sedges; the ground was of moist cracked mud. Scattered in this were clumps of low trees (15-20 ft.), acacia and broader leaf trees, with dense tangles about some of the trees. If the trees were taller it could be called a forest-savannah edge. - it is a grass-scrub edge, the grassland the openness of the bushes maintained by grazing. I saw one Hylid frog in the grass here, and lots of dragonflies, butterflies and misquitos. Stayed out until about noon, and had a bath. Every time I turned around I found something I hadn't

5 March

Guayaquil, Guayas Prov., Ecuador
Seen before, and there were a number of sounds to which I could associate no bird - a Black-headed Grosbeak type of song, for instance. Had much better luck with small birds than large ones. After lunch I tried out of the side roads which proved to be very good. ~~There~~ was much standing water here and I stayed on the road. Went out across a heavy dry mud field and then along a second road that lead to some 60-80 ft tall, prob. deciduous trees which were full of birds. The area I spent the most time in was near an Ecuadorian's house and much of the undergrowth had been cleared. Elsewhere there was a dense undergrowth which almost precluded entry, except along horse or cattle trails. The land here was dry, but there were several ponds with sedges and grass growing around near by. Mosquitoes were annoyingly abundant here, and I ran out of O/b, too cold to the misery. Saw no lizards but heard frogs; birds were excellent. It was cool and overcast, all day, barely raining towards the end of the day and this much eased the weather for the stay. Many of the birds were the same as the ones I saw the third, and a few were the same as I saw yesterday. Could have had a great time (except for the mosquitoes) working this area the whole three days I had free.

5 March Guayaquil, Guayas Prov., Ecuador.

a map of this area is.



The birds seen included the following species I had found on the thicket:

30 Laughing Gulls - at the port at noon

1 Franklin's Gull - adult in molt, at a large pool at the 1st road junction in the evening as I came in.

4 or 5 Magnificent Frigatebirds, seen flying overhead.

① - fairly common and singing in the patches of scrub. not as common as in the dry scrub. Saw one in ♀ plumage singing. Some ♀s have streaked breasts.

②. Yellow-Green Vireo - fairly unevenly distributed and not very common but

5 March

Guayaquil, Guayas Prov., Ecuador

band and familiar. Singing in the scrub patches.

③ Vermillion Flycatcher - one dead male, silent, only.

4 ④ Groove-billed Ani - widely distributed, conspicuous and "common" for a bird its size. Not shy so its #s are prob. out of proportion compared to the other species.

⑤ Black Vulture - only 4 or 5 during the day.

⑥ Turkey Vulture - do., all soaring.

⑦ "military Stalling" - widely spaced in the bushes around the clumps of tules. The song starts like a Blackbird, ends on a buzzy "tett ta teeee"
— — — — —
— — — — —

⑧ Gnatcatcher - scarce - 6 or 8 in the day, in the clumps of scrub. One bird had a solid black cap, ~~the other~~ ^{and black} line to the eye, all the rest were grey headed. Sounds like a Blue-grey, call note. No song.

⑨ Ground Dove - only 2 or 3. Another dove () was much commoner.

⑩ Martini - not common for a swallow but always 1 or 2 in sight overhead and frequently perched. Some are very pale breasted.

⑪ fairly common in all situations, and singing loudly. Saw several stages of throat molt, from very

March 5

Guayaquil, Guayas Prov., Ecuador
pale throat cross-band to a black reaction streak to a black cross band and throat. Had much trouble associating the ♀ of all the species.

(22) Seedeater - the commonest species here, in small flocks out in the grass and singing from all heights 1 ft to tree top. Absent only in the heavily forested areas, but present on the edges. ♀s seem to be fairly variable, or I am confusing it with another species; there is a light and a heavy streaked (on the breast) ♀ here. See species # 22 which may be the same, in another plumage. The song is quite variable, and more usually given from a perch. It seems to be the only "trill" song here, except for the confusing ones. The flight song is a longer, lighter version of the perched song.

(23) Very variable. This is the black finch I took yesterday, and is exceedingly variable as to the plumage it sings in. It varies from a brown bird, with a trace of blue on the breast, to a black-headed, brown backed, to a blue-black bird with white mottling on its belly, to a solid blue & black finch. Bill black. When in a flush, singing it jumps up about 6-10 inches, does a somersault, and returns to the former perch. When on top it stays perched, usually. Song is a buzzy ^{p. t. buzz} "pit-tzee", c. 3/4 second long. ♀ is brown and heavily streaked on the breast. I prob. confuse it with the above fairly often. It is ~~for~~ common in much the same situation, but more evenly and widely

March 5 Guayaquil, Guayas Prov., Ecuador
spaced.

(25) Parotillet - same as the one I collected. The
bluish crown is hard to see in the field. Some seem
to have a blue preocular stripe. Fairly common in
small flocks. Saw two near, and apparently interested
in an old mud domed nest (of # ?).

(26) House wren. Song only, never saw it.
Only 2 or 3 ♂s all day.

(27) Woodpecker - Red back + black tail, base
of tail red. Very variable & more than 6 species.
One had white face (brownish auriculars), black
crown; black primaries. Another grey crown & face.
Another black nape and red crown. Has a short
'Dendrocopos villosus'-like call and a long descend-
ing trill, which I thought was a wren or something
like that at first.

(34) Prob. the same. - white wing bars on both
sexes and the brown bird has black cheeks and
a rufous-brown crest. Saw 4 or 5 and heard as
many more. In the dense clumps of brush. Saw
a brown one carrying a caterpillar.

(39) Saw 3 or four of these in the scrub. The
song impressed me as being more of "tic" notes,
followed by a buzz and the face appeared a little
more uniform. Same species?

The following species were either new today,
or seen in detail today for the first time and noted

March 5 Guayaquil, Guayas Prov., Ecuador
yesterday.

- (41) Oven-bird sp. - the Bronze Thrush of yesterday; orange
brassy ~~supra~~ above (brown on breast on some), buffy
white below, orange on the breast; a pale buffy
superciliary. Short tail, long pink legs; a pale
brassy patch on the open primary bases in flight.
Flips the tail up, drops it. Flight with stiff wing
beats like a Spotted Sandpiper, and the feet dangle.
Calls mutually, a series of raucous short calls
descending in pitch & shortening in length.

"earrrr earrrr earrr earr ear". Makes a domed
mud nest about 12" long & 9" in diameter plastered
on a large branch, 6-8 ft from the ground and
under the canopy. Saw 10-20 and heard many
more. A common bird.

- (42) Least Sandpiper - Saw about 20 in the wet
areas, in the areas of submerged grass.

- (43) Greater Yellowlegs - saw 1 in the A.M. & 4 in
the P.M. in the same areas.

- (44) Spotted Sandpiper - saw 2 in the same areas.

- (45) Seedater - grey head, brown streaked band,
white spot on closed wing (white stripe in flight),
white below bird to tail. May be a "non-breeding
plumage" of #22 but sings, a similar tinkling song.
Note sure of a ♀ for it.

- (46) Seedater - striking black and white in
the male, like a ♀ Yellowthroat in the female.

March 5

Guayaquil, Guayas Prov., Ecuador

short stubby bill. ♂ pattern
never heard it sing or call
for certain. In the same




situations at the other seed-eater-type flocks. Very
pretty.

- (47) Seed-eater - only saw this two or three times,
may be 1st year (juv.) of # 22. The back is brown, pale,
with a pale malar ~~streak~~^{spot} and the wings are grey with a
white spot at the base of the primaries, the tail dark.
No song for this.

- (48) Hummingbird - straight red + black-tipped bill,
(back) + top of head green with a bluish iridescence,
a forked green gorget, white breast, buff sides, belly,
wings, tail + lower ~~abdomen~~^{abdomen}. large Fan-tailed, forked
tail. Saw about 4-5 of these in exposed perches
in the patches of shrubbery. somewhat larger than
Calypte anna.

- (49) ? Ibis - brown body, greyish neck, straight, dull
pointed bill, orange (dull) with black tips. black eyes.
Stretches neck when alarmed. Flies with a /wavy,
short, stiff wing beat, the primaries wide open.

, the neck out. Saw 3 of them. The
only Ciconiiform bird for the area seen well today.
(pinner sized).

- (50) small flycatcher. faintly streaked on back and
breast. Back brown, belly yellow, grey (ashy) head
+ breast, a pale superciliary and 2-3 yellowish
wing bars. Tail forked or double rounded. Found a

March 5

Grayagail, Guayas Prov., Ecuador
with 2 brownish, dark blotched eggs. The nest was of
coarse sticks which were loosely cemented together.
~~It~~ hung from a pine, at the end of the branch.

The nest was about 4 x 4 x 6" deep. The
cup had little lining and was c 5 1/2"
deep. The ♀ allowed approach to 6 ft.

Never associated the song of this species with
the bird - too many flycatcher like songs.

(51) Myiarchus - long crest, rounded tail,
very pale on belly and breast. Silent. Not a
Wied's Antbird but this size. 1 pair for sure, only.

(52) Kingbird - pale throat, grayish breast, yellow
belly, forked (slight) black tail, black mark through
eye. Very common and only saw 1 or 2 Tropical
a Cassin's Flycatcher here. Calls are high pitched.

(53) Tyrannulet - empidonax size with large
black flat bill. Yellow belly, whitish throat,
brownish back, and grayish crown crown, black
face colors blending except for face mask. One ^{sex}
is darker with yellow feather edging on wings,
other is duller & uniform on wing. Outer tail feathers
(or web of) pale. Has a hummer-like chatter,
keeps about as actively in the acacias. Fairly
common, but took me a long time to find it.

(54) ? Harris' Hawk - black, rufous upper body
coverts & legs, series divided white rump, white tail
tip. deep. Throaty call. Saw three, a pair and then 1.

March 5

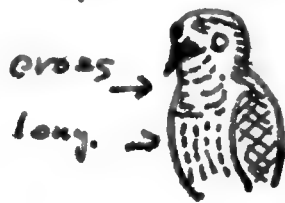
Guayaquil, Guayas Prov., Ecuador.

(55)

Wren - about as big as a small cactus wren. Rufous, wings and tail cross banded, tail square, white supercilious, bordered with black. plain pale buffy below, rufous under the tail + under tail coverts, bending, unmarked. Like a Giant rufous "Bewick's" Wren. No noise but a scratch (fast)-like buzz sound. Saw only 1 or 2 pairs. in scrub.

(56)

Woodpecker - Downy woodpecker size. brown back, white belly marked with gray, tail with long, black + white stripes. ♀ gray headed. ♂ with yellow forehead, black ~~plumage~~ ^{plumage}, each feather with white tip spot. Breast pattern was of five lines of darker grey as:



tail = A simple sketch of a tail with two prominent vertical black bars.

Saw only one pair in the A.M.

(57)

(?) Cuckoo - 12-14" long (jay size) Brown above, streaked with darker, crested, crown black; a long rect. pale spot from eye to the ~~ear~~ ^{eye}, black malar stripe. lighter buffy below, unmarked. Bill short, decurved. Sat on top of a dead bush in the scrub and sang, a clear double whistle, melodious, "wee hee", over and over. Saw only 1 and heard 2 more. No markings in flight.

(58)

"Flycatcher" - grey, paler below, with a black crest and eye stripe; black wings + 2 white wing bars + white feather edging; tail black with white tip, shortish. bill black, tip ~~dark~~ ^{hooked}. Sat quietly in

March 5 Guayaquil, Guayas Prov., Ecuador.

a bush then flew off when I approached. Only saw one, in the A.M.

(59) Charadrius plover, a little larger than Semipal. brown back, rufous nape, 1 black collar, black fore head (+ white to over eye), eye stripe and lower side of neck to collar. Long, thin black bill, pink legs. Cud a melodious "Erolia bairdi" like call, short, + rattle. Runs on ground and tries to hide in grass or crouches in old footprints in the mud. Flight pattern is a light wing strokes + white tail sides. Collared Plover?

(60) Charadrius plover - slightly larger than the above, paler on back. white nape, larger black bill, ~~black~~ shaped, black. legs pink. Same flight pattern as the above. Some with brown collars, others with black forehead (thus white to behind eye), black eye stripes, 1 black neck band.). Pink legs. Runs when chased, doesn't like to fly. More in flocks than the above. Both were on the bare mud area at dusk. This is ? Wilson's Plover.

(61) "Hawk" - black with long black legs, white head and orange bill; one had orange wattle. Tail white with narrow black tip, large white patch at the base of the primaries. Black crest (and eye stripes). Saw only 1 pair in tall trees near the heavy forest; flushed at a long range. silent. Very large Buteo size.


DeBenedictis:
1964



(216)


March 5 Guayaquil, Guayas Prov. Ecuador

(62) ? Cowbird - brown, uniform, paler below; black malar stripes. Not long bill. Silent. Saw it on a tree top on the way in at noon

? Red eyed Cowbird - looked like a short billed & Brewer blackbird. One in a flock of poorly seen black birds.

(63) ? Ovenbird. White, sometimes with a little rufous on the back. Black mask and wings & tail like a wheatear. White tail tip, looks like  when closed. Hopped about on the ground and flip the tail up and down like #41. Saw 3 or 4 in the afternoon along the wetter areas, none in the dry spots. Silent and tame.

(64) Pewee or Olive-sided Bird Flycatcher. Dark brown back, tail & wings. Tail like tropical Kingbird. belly yellow, throat white, crown grey, black jaw marks & white ^{superciliary} ~~superciliary~~, wide, converging over the bill  . Saw 3 or 4 in the wetter areas near the taller trees. Silent.

(65) (#50?) Small (pewee) crested Flycatcher . ~~grey-brown~~ ^{brown-grey} back, grey head and breast, crown and streaks through the eye darker, pale yellow belly. Stands high legged and cocks the tail frequently. Saw this mostly in the second part of the day, but not uncommon. May have overlooked it before.

March 5

Guayaquil, Guayas Prov., Ecuador.

- (66) Flycatcher - large (Kingbird +), heavy head, crested bushy; large black bill, black eye. Uniform bronze, on the back, paler below, no pattern in flight (rapid normal strokes). Black legs. Flycatcher's chatter, high pitch. Saw 4, all in the forested area. Same color as #41, very striking.

- (67) Small wren, mod. tail. Rufous above with ~~light~~ ^{light} superciliary, pale, unmarked below, under tail coverts & under tail rufous. Saw 3 or 4 in the low bush and tall sedge near the forested area. Didn't hear anything from them. Flies low and looks very & buffy white in flight. Identifiable?

- (68) ? Saltator. Short black tanager bill (Cactospiza) Uniform brown above, pale buffy white below and on the breast, square ended superciliary. No markings otherwise. Saw one in the bush near the tall tree in the afternoon.


- (69) ? Tanager - tanager bill, brown wings, grey back, breast buff, streaked, belly white. In the bushes near the tall trees. One only.

- (70) Flycatcher. Crested, bushy, Mittalornis size. Solid black (or blue black).

- (71) Hummingbird. Anna's size. Green back, white tail tip. Bill & line bill to eye black. Throat & upper breast and sides buffy rufous, belly white. Prob. a ♀. Saw a male which was the same except for


March 5

Guayaquil, Guayas Prov., Ecuador

an all dark tail, a dark (no color) -shaped gorget which stood out from the breast & left a white "malar" mark below the face. ? Gorget green or maxillaries blue. Saw only ~~them~~ well, but other hummers near by may have been this. At the forest edge in the afternoon, near the following.

(72) Large Hummingbird. Bill dark,  shape.

Green, blackish fan, forked tail & blackish primaries. Sides of belly turquoise, iridescent, throat, mid breast iridescent blue. Belly black (green or blue). Saw one for sure at forest edge, prob. another in the scrub. in the A.M. The well seen bird was ^{perched} ~~and~~ prominently over a large ~~group~~ ^{brush} of orange-red flowers. Nice bird.

(73) Dove. size and shape of Inca dove, ~~faun~~-grey color, coarse black (narrow) cross bars on back, Under side of wings and tail black, as was bill; feet dull red. Otherwise no pattern. ~~One~~ ^{Two} raised a short abrupt crest. . Fairly common along the forest edge but shy and hard to see. Call a low, soft, "coo hoo".

(74) Tanager - gray, short black bill, Stellar Jay ^{blue} ~~bill~~ flight feathers. Black eye. Smaller than #38, not as long looking. Has a fast chatter song in between a seedeater and a flycatcher. Saw one in a tree at the forest edge and two well out in the open in the wet area.

March 5

Guayaquil, Guayas Prov., Ecuador.

(75)

"Barbet" - the bird Billeb shot yesterday: brown above, streaked, rufous flight feathers, black facial and malar stripe, white below, heavy streaks on the breast and belly. Kingbird - to Jay size.

Very noisy, but sits silently in tree top otherwise. Saw one pair in the forest, and heard another.

(76)

Smallish yellow Troupall - small, pale bill, dark eye, yellow rump, belly + under tailcoverts, and upper wing coverts. Same long hanging nest as before. Common in the heavy forest, in a colony. (Same as # 11)

(77)

Cookoo - black, white tail tip, rufous red, rounded wings, short bill. Larger than a Scrub Jay. Seen flying across the road in the heavy forest.

(78)

Swift. Chaetura shape, black, size of a ^{one,} ~~manini~~ ~~procyon~~. Seen poorly from below in the late afternoon.

(79)

Finch, size of Zonotrichia, brown above, pale below, black bill, sparrow (rounded) bill, molting. a blue-black V on the breast. One only, in the brush in a dry area.

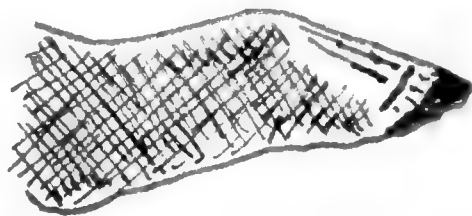
Spent the evening writing notes and went to bed. Leave c. 6 A.M. tomorrow if everyone gets back. Tired. Mosquitoes et al. biting fiercely this evening.

DeBenedictis
1964

(220)

March 6


Guayaquil to Cosco Is. on board the "Golden Bear"
woke up to discover the pier was disappearing into the
distance. Have the "tourisa", damn!. I dragged
my camera out to the forward hold and watched
birds for a while. Not much around. We got out of
the narrow section of the port much more rapidly
than we came in, and were farther from the
bank. Saw 4 small (ashy) slate-blue herons with
dark bills flying across the river, and later another
with a Snowy Egret, showing it is a smaller heron,
probably Florida Coccyzus. Saw 4 Ospreys sitting
in the mangroves. Two medium sized, short
tailed Parrots flew across the river. They were
uniformly green with red-orange secondaries.
Couldn't tell about facial markings. Several
Frigate birds flying overhead, and chasing gulls.
We quickly picked up a good group of herring,
Gulls and a few Gray-headed Gulls, which were
quite vocal. They landed on the ~~last~~ ^{forward} boom as
when we came in and called frequently, often
from a low oblique or forward position. Saw one
1st year bird, the wings marked:



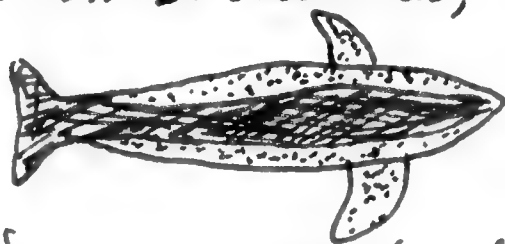
and like the adult below. Saw 2

nice adult Franklin's Gulls flying along side the
ship for a short time, and had a dozen Spotted
Sandpipers. One whimbrel in the mangroves. The
tide was low and several mudflats were exposed.

March 6

on board "Golden Bear", Guayaquil to Cocos Island.
Snowy Egrets, Laughing Gulls, Brown Pelicans & large
shorebirds were conspicuous on shore. There were
a # of Sandwich Terns on the bays as we went
out and I saw 1 Royal Tern flying past the
ship. As the river became wider I spotted two
large hawks, dull rufous brown with black flight
feathers, very broad winged and short tailed.
 White Ibis were quite conspicuous
here, flying across the river in groups of 4 to
8 and scattered single birds were present as
well. The Grey headed Gulls stayed with the
boat for only a little ways beyond the mouth of
the bay and the Laughing Gulls followed us
way out, although not out of sight of land.
Frigate birds and Brown Pelicans were fairly
common in the bay, feeding in large flocks near
the fishing boats with large groups of Laughing
Gulls. Saw 4 Peruvian Boobies, Sula variegata.
They look like a cross between Masked and Blue-foot,
a shimmering white head ~~with~~ a pale bluish bill, dark
half mask, and a sharply set off checkered dark
brown (or blackish) mantle. The tail was dark. Most
were sitting on the water. As we got further out we
saw over 100 Blue-footed Boobies, and the contrast
between the species was marked. The latter has large
white patches on the back & the top of the head always
looks dirty colored, even on very pale birds. After about

March 6 on board "Golden Bear", Guayaquil to Coco Island
10:30 the Boobies puffed out, but a small tern,
Sterna sp. appeared in the hundreds far off shore,
flying about in large open flocks and feeding
in dense circular flocks, skimming from the
surface like Noddies. They mostly stayed 100 ft
out to be identified, but seemed to be one of the
hirundo type, with a prominent pale collar, and
the whole edge of the wing ^{tip} dark, especially below.
Caps hard to see, probably incomplete. They were
about 4-6" smaller than laughing gulls. There
was 1 or 2 groups of laughing gulls way out,
and about 11:30 saw 2 Black Petrels. Slept
most of the afternoon, and about 3:15 saw
one Masked Booby. Lots of flying fish. + many
fish breaking the surface. Near the mouth of the
Bay of Guayaquil Porpoises came very close to the
ship ^{in the bay water}. They had a poor patch and were pale
greyish olive with a darker, sharply set off dorsal
band as so:



(dorsal
view.)


They some-

times seemed to have a poorly defined darker lateral
band as well, but this may have been a high light effect.
The dorsal fin was quite high. They were in small
groups, often only 2 or 4 and never more than 10.
From about 9:30 to 10:30 we had Peasnoth. Pelamis
platensis in sight almost constantly. They were swimming
on the surface, slow undulations and once one would


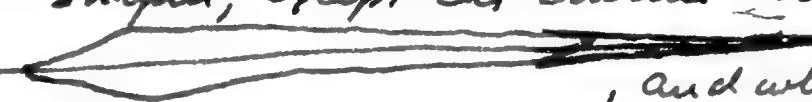
1964

(223)




March 6

On board "Golden Bear", Guayaquil to Cocos Island.
 left its beach out as we came by. The large head &
 pattern:  clearly identified the
 species. They did not attempt to dive but
 disappeared in the ~~water~~^{foam} as we went by to once
 close to the ship. They came by every 2 to 3
 minutes at first and at one time we saw 15-20
 within a 2 or 3 minute period. Saw very little in
 the evening, wrote notes and went to bed after watching
 the movie "Titanic" - Great show for her.


March 7.

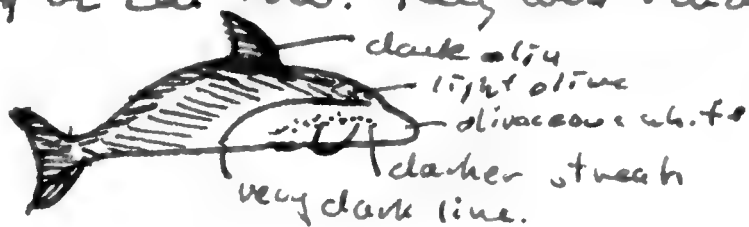
Got up late, and didn't get out until after breakfast.
 Watched from 7:30 to 8:30 but saw very few birds. ✓
 Watched Boobies and an Oceanodroma leucorhoa. All were
 near a squid area, and widely scattered. It is over
 east and fairly cloudy today. One of the McKay's humming
 birds died and I decided to skeletonize it. Description:
 above: brown with a brassy green iridescence to the feather tips,
 lower back and (especially) rump with buffy mottling. wings
 blackish. Tail ~~of~~ ^{basally} dark brown ~~feet~~, black distally with white
 tips,  shaped, except the central two which
 are elongate ptd. , and white margins
 Buffy white. Tufts from above eye to post auricular region,
 and nostril to below eye, facial mask blackish brown;
 a light buff throat streak, long., bordered by brown to, pale malar
 streak, breast brown, mottled, belly buffy white. Bill black, basal
 3/4 of lower mandible buffy flesh, blending to the black; legs and
 feet pink, the feet pads lighter; iris black. Wing (chond) 60.5 mm.
 tail 69 1/4 mm. tarsus 6 1/2 mm. Left most of the skin on my preparation.

March 7

on board "Golden Bear", Cruzaguit to Locos Island.
Went out again from 9:20 to 10. before 8:30 I saw
2 Leach's Petrels together, and shortly before them
an O. tethys. Again the size and flight were very sim-
ilar, but the tails very differently marked. They all
were very close to the ship so I could see them
clearly. The Leach's were marked  while the
tethys was . A ♀ or imm. Frigatebird appeared
far off in the distance about this time. Between
9:30 and 10 there was a lot of action. 5 Oceanos-
chona castro in a open flock, showing a slower
flight and the tail marked . About 4 Lave
Masked Boobies went by and in a large feeding
flock there were half a dozen more, with 5 or so
Blue-foots, about 100 Sooty Terns and 1 White
Noddy (Gygis alba). They were circling about
high in the air, the terns occasionally dipping to
the surface and the Boobies diving. The Noddy
stood out as a pure white tern among the black
and white Sooties, but was too far out to see any
details. There are some very tiny flying fish about,
only 2 or 3 inches long, which look like small
springid moths when they glide. Lots of bigger ones,
but these mostly solitary. ^{an O. tethys near here} Quit too after 11. Between
11:15 and 11:30 Saw one more O. castro. There was
one castro and a Black Petrel following the ship
at a considerable distance at this time. At 12:30
there were 2 castro and a Black Petrel following. The

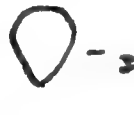

March 7

on board "Golden Bear", Guayaquil to Coco Island
Castro show wide tail bands but the slow logy fight.
possibility, I am confusing them with tethys. From
the bow I saw 4 more of these Castro, 2 at a time
at a fair distance. The tail is marked like a
tethys. Between 1 and 1:30 I saw a good castro
and an Oceanulites which was 1²' sitting on the
water in front of the ship. It got up carrying ^{a 2-3} inch
long segment of a fish tail, and flew 25-30 ft, sat
down, got up again and flew off. The tail was
very distinctively marked, like an even banded
leach's only the Black was always = wide .
Couldn't see the feet. Probably O. oceanites here;
it looked very unlike the petrels I have seen before
on this trip, although I am not sure why (tail +?
longer wings). At 2 we went back to Central Time
and it again became 1 P.M. Went out from 3:15 to
4:15. Saw a group of 50-60 penguins very close
but not playing on the bow. They were small - 6-8 ft,
marked as



One ² with a young ^{3/4}'s hatched size stayed off the ship
for some time; the two jumped from the water in
synchrony and hit the water as one animal. Most were
going forward but some hit the water on their side and
others went almost straight up, and then landed on the
belly with a great splash. They stayed with the bear

March 7

on board "Golden Bear," Guayaquil to Cocos Island,
for 3 or 4 minutes before disappearing. Also
saw a Hawks bill turtle. It was marked orange and
red-brown, and the rear of the shell was more
pointed than in green turtles, -shaped. The
snout was also very sharply pointed and well
set off. It was very close and disappeared under
the prow from the bow. When I²¹ saw the flippers
were up over the shell and the head out: , and
the animal appeared to be floating. Saw one O. costus,
usual tail, during this period. Went out from
4:45 to 5:15 but only saw 1 O. costus. Bred to
death, ~~feet~~^{feet} all worn out mentally. Wrote notes
in the evening. The midshipmen have been swiping our
C-rations. The cases were removed, the bands slid off,
everything eaten, and then the bands were replaced and
the cases returned. They were caught because one of the
midshipmen was smoking the cigarettes in our quarters.
Also learned that the bus used to take everyone into
town had been commandeered for 4 hours while the
midshipmen ~~boozed~~^{boozed}-up. Guayaquil must have been wild.

March 8

went we got up Cocos was just barely visible in the
distance, and we got in about 10. There were lots of
Boobies flying out but little else. Saw a nice Braconia
Taegae with tails just molting in, and a Oceanodroma
costus. Frigate birds, prob. magnificens were circling
overhead. The Boobies were about equally divided in
numbers between Brown Red-footed and Brown Boobies.

March 8

Cocos Island, Costa Rica


The Redfooted Boobies all have a pale ashy blue bill and about the same color of facial skin. The immos. are darker and have a dark blue bill with pink facial skin and dull pink-red feet. The Brown Boobies are darker than the Red-foots in all plumage. The bill is a pale flesh color and the facial skin yellow in the adults. The immos. show the adult feather pattern in dark brown and a mottled dark brown, and the bill and facial skin is dark bluish. The two species are easy to separate at fairly close range, but further out - ?. They flew out in, ~~often~~ in mixed species groups of 4-12, and smaller groups of one species. Adult Brown (?) and Red-foots were seen at all distances but immos were seen only as we got fairly close to Cocos. Cocos is a beautiful island. It has 2 main characteristics. It is steep as all hell, rising at a +60-70° angle from the sea everywhere. The surface is deeply scarred by the creeks which have eroded deep valleys down to the ocean. Apparently there had been little rain recently, for the stream was only a pleasant babble, not a roaring cascade. From a distance the most impressive feature is the greenness of the island. Semi-bare rock cliffs are to be seen only at the coast; elsewhere the vegetation covers everything. The cliffs, for the most part, are not high near Chatham Bay, where we docked. The "Bear" came to c.

March 8 Chatham Bay, Corro Island, Costa Rica

a quarter mile out from shore and we went in from there. Took a lot of pictures from the boat to finish my last roll of 35. The bay has 2 nice coarse coral sand beaches, and very weathered lava rock been elsewhere. The forest comes down to the beach line, and to the one side there is a large tangle of a palm and legume and to the other the forest is broken by open low vegetation; centered in the forest area is a creek, which provides an easy passage to the higher part of the island. The forest is a magnificent 1 story forest - Tall tree with a low undergrowth. The trees are dense crowned and 50-80 ft. high; the branches and trunks are covered with bromeliads and there are "lágrimas" hanging from some of the trees. I went up the creek two times going about 1/4 mile each time, but got all the small birds on the beach. Along the creek there were large, often moss covered boulders, and the forest was open. The 1st time I went up I climbed up the side of the valley. This was covered with low ferns - 2-3 ft high, the plants were by separated and with considerable humus between. The plants were spaced as to allow easy passage but were close enough together to conceal the ~~the~~ and rocks in between. There were almost no obvious flowers nearby. Insects, except ~~the~~ flies were not bothersome, and there was one large conspicuous and very beautiful butterfly everywhere. The vertebrate fauna clearly

March 18 Chatham Bay, Cocos Island, Costa Rica.
Shows this ~~division~~ ^{division} of the vegetation. On the ground Anolis
johnsoni was abundant. They are mostly striped,
usually with dorsolateral yellow stripes but one with
only a vertical stripe. Some are ~~cross~~ ^{barred} with
darker V or W marks, and with or without dorsolateral
stripes. The gular fan of the male is orange. Like the west
Mexican Anolis, they usually hop rather than run long
distances. They are extremely abundant; one comes on one
every 5 or 7 ft in most places. All I saw were low down.
The birds - all of them - are just the opposite. The finches,
Pinnaroloxia, and the flycatchers, Mesochorus, both
tend to forage at high levels in the trees, 20 ft to tree top
level. The Flycatchers tended to stay higher, working
in the crown. They are ~~pink~~ ^{plain} olivaceous with yellowish wing
bars, and have a funny, chattering-musical call. They
are not very noisy; come to squeaking - sometimes.
The finches work from about 3 ft up to tree top, usually
above about 6 ft. when I saw them. They feed mainly on
the larger branches of the trees, probing in bark crevices and
under lichens, but not apparently tearing them off. They
also worked on leaves and in leaf axils. The bird looks rather
downcast, but its behavior reminds me much of an
orange crowned warbler. Saw one tearing a cicada
apart; the finch was holding the cicada apart and pulling
off legs and the cicada was buzzing like mad. The finches
made 3 or 4 soft calls; unfortunately I worked up a sufficient
sweat to erase the pencil note taken at the time. The song

March 8 Chalan Bay, Cocos Island, Costa Rica

was a very soft 3 part affair like an elaborate Geospiza, this quality, but higher ^{pitched} ~~pitched~~. They have an ascended "whee" ^{peeping} ~~peeping~~ whistle and the "seew" high-pitched whistle of the other species of geospizines. The only other landbird I saw were 3 Yellow Warblers along the beach. White Noddies were fairly common in the tree tops, but flushed on approach. I managed to shoot one. A beautiful bird with black eye, black eye ring, a black tipped blue bill  ^{black}, and blue feet and legs with white ^{web} ~~web~~ to the feet. I had horrible times shooting small birds and missed everything! I managed to hit 3 finches and Ted Papenfuss got 2 more and 2 Yellow Warblers for me on the beach while I watched. He caught 4 Crabs under rocks along the beach. The Red-footed and Brown Boobies all roosted in the trees as did the frigatebirds. I saw only 3 dark Noddies, Anous, but they were too far out to be identified: eyes very clear and prob. they are Black Noddies. There was a 1st year herring gull in the Bay, and the complete black tail band and, black outer primaries were clearly seen: the forehead was light and the ^{beak} ~~beak~~ was grey. Billed shot and adult Brown Booby. It had yellow feet. One of the midshipmen caught an imm. Frigatebird. It has a white head and a buff breast band; the bill, feet, and eye ring are pale blue and the darker feathers have a purplish sheen. Must check the adults but I think

March 8

Chatham Bay, Cocos Island, Costa Rica
it is I. magnificus. I spent some time helping Dr. Walker catch some fresh water fish he had ~~poisoned~~ ^{poisoned}. Dr. Weber got 28 of the two species of lizards known from Cocos. I guess I should have stayed in bed. Spent the night on the "Bear". The "Bear" went out for the night so she wouldn't be caught in the Bay by bad weather. Wrote notes in the evening. About 5 porpoise worked along in our bow stream, visible in the poor phosphorescence. They would ride along for a while, then one drop off, and shoot in from the side. Trails crisscrossed and when they shot forward they left a zig-zag trail. Very spectacular. I am very tired and slept like a log.

March 9

we got back to Cocos about 6:30 and were able to get ashore shortly after the 7:30 mass. Lots of Boobies and Frigatebirds in the bay but little else. Shortly after we got on the beach a dark noddy went roaring out to sea. After fussing around at camp for a while I took Papenfuss's pistol and went up the creek about $\frac{3}{4}$ of a mile. There were very few birds, calling or visible, along the lower section of the ~~creek~~ ^{creek}, but after climbing a cascade section I came to a flat area grown to grass with the usual forest on both sides. There were a ~~great~~ ^{good} number of finches here, feeding in the bushes, and several males were singing. Most of the finches were at treetop level, but they came down to squeaking with no hesitation and I managed to hit 5 birds here. As I started squeaking I spotted a tail with a redstart pattern and after realizing

DeBenedictis
1964

(232)

March 9

Chatam Bay, Cocos Island, Costa Rica
that none of the local species had this, I looked at it to find
a ♀ American Redstart. I was able to see it very well from below,
and could see the distinctive long tail, which was only
slightly panned, the yellow breast patches, greyish throat, and
darker ~~back~~^{sides}, and the white belly. It was too far up to shoot
and soon disappeared in the vegetation. There were
several White Noddies in the trees here and I saw the
tail of one dark Noddy, sp. There seemed to be two pairs
of flycatchers around and I missed a good shot at
one, never pulling the trigger. On the way up, just before
I got to the grassy area I flushed the Belted Kingfisher
Bowman and Billeb found yesterday. I could see it
poor from above and behind as it flew around me
and downstream, too far even to hit with a shot gun.
After working here I went up the creek for a ways,
then went up the left hand side of the creek's
canyon (facing up stream) to the top of the ridge.
The terrain here is the usual steep Cocos style, of steep
ridges which are very difficult to climb. I went up a
ridge covered with an Iris-like sedge and several very
odd, fungus-like ferns. At the top the ridges extend
spoke like from a central point and are fairly level,
the vegetation under the forest open and easy to trans-
verse. The ridges are very narrow and drop steeply off
from 25 to 50 or so feet to a steep gully, with small
(1 acre ±) flat benches on which I did most of my
shooting, for the birds shot on the ridges were hard to

St. Benedict's
1964

(233)

March 9 Chatham Bay, Coros Island, Costa Rica
retrieve, as the rolled, or when wounded, ran down hill.
Often one couldn't see where they hit. On the flats
recovery was no problem. The finches and flycatchers
were very common here, the finches showing a density
comparable to the birds on the Galapagos. It was
not unusual to see 8 or 10 in a small group working
high in a tree, and after a while one male would be-
gin to chase others away. I saw only 2 or 3, all ♀ plum-
aged, birds lower than 4 ft, and well over half the
birds were ^{over} 25 ft from the ground. They did come
lower when I squeaked. Saw one pulling a cicada apart
like yesterday. The ^{seem} ~~seem~~ to probe bark and ^{severe} ~~severe~~ were
seen tearing dead leaves apart. Two were seen "flycatch-
ing." A ♂ spent nearly a minute in the air in a
slow sinuous flight apparently chasing something, then
turning to another object and chasing that. It landed
^{on} ~~on~~ a large bromeliad covered branch. foraged there,
and then went off on a shorter similar flight. Later I
saw a ♀ plumaged bird doing the same thing. The ♂s
very frequently show a tail drooped + spread, wing
drooped posture, with the feathers of the head and body
fluffed somewhat, and so. They forage in a wing-
drooped, tail up posture. The two postures look like:



Benedictis
1964

(234)

March 9

Chatham Bay, Coros Island, Costa Rica

The ♂ song was very ~~Geospiza~~ ^{Geospiza} like, ~~usually~~ a buzz two-parted. fair light pitched and very buzzy, $\text{cha}^{\text{wiz2222}}$, occasionally with an end note $\text{cha}^{\text{wiz2222}}$ chizz . The song was only about $\frac{1}{2}$ ~~second~~ ^{second} long. They also have a short, ~~buzz~~ ^{buzz} song which is less certhidea like, cha^{bizz} , and all the songs have much of a Geospiza quality. They have a high descending whistle, ———— which may or may not end with a low buzzy "wizz" note, on one pitch. The call note is similar to a small Geospiza, while a "phee" note is like a distant Evening Grosbeak. Several other short notes ~~I heard could not~~ ^{I heard could not} ~~be~~ ^{be} ~~certainly~~ ^{certainly} assigned to the species. Saw one nest, a domed affair of fine ^(?) roots about 20 ft up in a small tree. The flight has the slow, baby-bird appearance of the other Geospizines, and the wings and tail (short) always look very rounded. The flycatchers are not so common as the finches, about 1 pair per acre on the whole. I saw only 10-12 of the birds but they call loudly and all day through to about 3 P.M., when everything shuts up. Only one call, which I suspect is given by both members of the pair, antiphonally, and more frequently by the ^(?) ♂ alone, could be assigned to the species, the high pitched, musical series of descending notes $\text{"ti-ti-ti-ti-ti-ti-ti-ti-ti"}$, slowing a little towards the end. The "song" is about $\frac{1}{2}$ second long, the notes distinguishable but just barely countable. The birds forage almost exclusively in the high canopy and are easily distinguishable by their very long tail and olive-yellow color.

DeBenedictis
1964

(235)

March 9

Chatteram Bay, Cores Island, Costa Rica
when in flight. Saw none less than 10 ft. from the ground and flew below 30 ft. (2 or 3 only). Had a horrible time shooting them. After about 10 shots I got one, and the only other one I hit landed in a *Nonnelia* well out of reach. The leaves around them would disappear and I could see the bird crouching on a bare twig; most frustrating. Saw one Coccyzus ferrugineus; the wings and tail & lower breast are rust colored in flight and the head is grey, the throat and breast white. It is a very shy shenky bird and probably a lot more common than what I saw. It was well up in a tree over a gully where I couldn't possibly have been retrieved if shot. I saw another Redstart, this with darker breast patches up here, but missed it on a longish shot. Got nothing else. The ~~white~~ White ~~Woddis~~ Woddies were buzzing around a lot, and their is a low, throaty "warrrrr" repeated 4 to 8 times. Lots of Boobies and Frigatebirds audible, but seldom visible. The White Woddies are mostly perching in the trees but occasionally a lone bird will fly out to the ocean. I got back to camp about 1, after going down a cliff to the creek - fell 25 ft through some ferns and landed on a ledge 25-30 ft. from the bottom and had to get help to get down. After lunch I went back up to try to get some more flycatchers but they had almost entirely stopped singing and I only saw 3, of which I was close enough to shoot at (missed it, needless to say). The finches were mostly quiet now also. Saw a yellow-billed

DeBenedictis
1964

(236)

March 9

Chatham Bay, Coos Island, Costa Rica
? juvenile on the ground and shot a ♂ in transition plumage.
Got lost going back and took a long time finding the trail down, which consumed a lot of time. Had to leave the island, today with little regrets, about 4 P.M. The vegetation is very reminiscent in form of the laurel-woodlands along a gulch in Marin Co., and even the creek shows much similarity in form. Perhaps the resemblance to home is what makes the island so pleasant. The gobblers ~~are~~ caught in the creek yesterday have large rasping teeth and probably feed in a tad-pole manner. ~~Perhaps~~ ^{Perhaps} their presence would be enough to ~~prevent~~ ^{prevent} the establishment of a frog if it could be rafted to the island. The white Noddies have very large eyes, even larger than Ceryle relatives to the head; wonder if they are nocturnal also. The island was very insect free and only near camp were flies bothersome; got lots of fire ants when I fell down the cliff. Ocean very warm here. Saw the Laughing Gull ~~from~~ ^{from} the boat. Hendrickson captured another juvenile pigatbird which had landed in the water and kept it on board overnight. Same plumage as the ones before, back with purplish feathers. Left the island about 6. Read and saw a movie in the evening. Tried to go to bed but kept waking up with that cliff on my mind. Birds in the freezer.


March 10

Pickit sleep well at all. Wake up stiff and sore in the legs. Wrote notes in the morning and then straightened up.

DeBenedictis
1964

(237)


March 10

on board "Golden Bear", Cocos Is. to San Diego, Calif.
went out from 7:45 to 9. Beautiful clear, calm
weather and a fair number of birds around
considering the last few days. Saw 2 Oceanodroma
castro before 8 and 4 between 8 + 8:30 as well
as a dark-phase and 3 light-phase Puffinus
pacificus. Shortly before these appeared a smaller,
all chocolate-brown shearwater, black billed,
crossed in front of the bow; the wings were held much
straighter than in the P. pacificus. The dark bird
was either P. griseus or P. tenuirostris, prob. the
latter. Between 8:30 and 9 saw 2 more light
phase Wedge-tail Shearwaters. Was interrupted
twice by emergency drills on board. The birds
were passing by singly or in 2s, no groups,
and fairly evenly spaced at first. Went to sleep
between 9 and 10, then out to 11:30. Between
10 and 10:30 saw 5 (3 in a group, 2 solitary)
O. castro, 2 solitary dark-phase and 2 solitary
light-phase Wedge-tail Shearwaters. They have
all had the light bar on the greater secondary coverts
and all have had the slow wing beat and arched
carpal  as noted on the trip down. The other
secondary coverts are light-tipped, and the head is
dark to the throat (includes throat region), the color
blending. All birds seen were flying along, effortlessly
passing the ship. A Sooty Tern passed the ship
at this time also. Occ. see something breaking water

eBenedict
1967

(238)

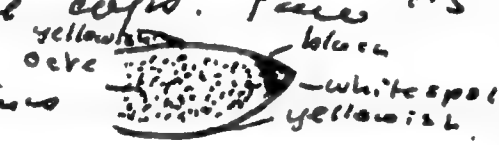
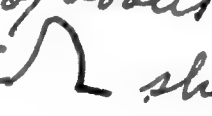
March 11

on board "Colden Bear", Locos Is. to San Diego, Calif.
far off in the distance. Between 10:30 and 11
I saw one dark Booby, far off in the distance
circling over a group of porpoise, and I also
saw 5 light-phase Wedge-tail Shearwaters, 3,
then 2 together. Between 11 and 11:30 saw a pale
bluish-billed, dark phase Red-footed Booby and
5 light-phase Wedge-tails came close to the
ship. Their bill looks dark with a pink upper
mandible except the base and tip, which are dark.
Far off, there was a group of 200-300 wedge-tails
milling about like Sooties off the Calif. coast,
and many were sitting on the water. Didn't
see any feeding. One Frigatebird with them. 4
rapidly flying Oceanodroma went by, prob. O.
castro by its tail. Shortly after this, c. 11, 2
fin-black whales - one 50-60 ft. long, with a black
back and a high sharp  dorsal fin, appeared
in front of the ship. There were 75[±] Sooty Terns, a
Frigatebird and 25[±] Wedge-tail Shearwaters. The
Terns all flew off as we approached; the frigatebird
following, while the shearwaters milled about, about
2/3 swimming on the water. Quit for lunch at 11:30
and from 12 to 12:30 saw only 1 Leach's Petrel,
with a clearly divided white rump patch. It flew
much like the last O. castro I saw, but faster than
the ones I saw in the morning. From 12:30 to 1 saw
a pale Wedge-tail Shearwater and 3 Rapidly flying

March 10

on board "Golden Bear", Coos Is. to San Diego, Calif.
Oceanodroma^(?) castro. Went in and slept most of
the afternoon, out again from 4 to 5. Only 1
Wedgetail before 4:30 but a Black Petrel, a dark
Red-footed Booby and 4 Wedge-tail Shearwaters
after this time. Almost all the Wedgetails seen
today were light phase and almost all had the
clear whitish bar on the secondary coverts. Nothing
followed the ship today. Flying fish were spotty,
with some large schools seen. The very small
ones are still around. Both clear and Brown-
winged species about. After dinner wrote notes
and went to the crew's movie. Got to bed late.

March 11

Woke up late today and didn't get out until about 7:30.
Clear, windy and choppy, little white caps. Fair #5
of flying fish, saw one pretty one, fins .
Very few birds about; Nothing 7:30 to 8:30. A dark phase,
blue-billed Red-footed Booby landed on the forward
boom about 8:45 and 2 Red-billed Tropicbirds flew
over shortly before 8:30. Saw a school of about 15 all
dark porpoise, beaked and with a  shaped
dorsal fin, the narrow ^{posterior} ~~post~~ to the head. The fin was high
and c. 1/2 back along the back. Went in until 10, then
out again until 11. 4 Red-footed Boobies in a group went
by and the one on the forward boom is still present. Saw
a Leach's Petrel with a clearly divided rump-patch
between 10:30 and 11. Went down for lunch and back
at noon. Saw a good plumaged Parasitic Jaeger

March 11.

on board "Golden Bear", Cocos Is. to San Diego, Calif.
in intermediate plumage. Saw a petrel at the same
time. Between 12:30 and 1 saw a dark Red-footed
Booby flying along the boat as usual. The bill is pale
bluish and the skin pink. A group of 5 Leach
Petrels appeared in front of the ship, but soon dispersed.
They were too far off to see in detail but had the fluttery
flight of the Leach's before, and the rump patch seemed to
be divided. A pale phase Wedge-tail Shearwater
flew by after this. Went in from 1 to 4 when I
went out for another hour. Saw only 1 Red-footed
Booby between 4 and 4:30, and another Parasitic
Jaeger, 4 Red-footed Boobies (in 2 groups of 2)
and another Wedge-tail Shearwater from 4:30.
to 5. Stayed out a little after this, seeing 2 more
Red-footed Boobies, and after dinner saw 3 more
+ a Wedge-tailed Shearwater. Very dull day.
Still very tired.

March 12

Got up early and went out to watch from 6:30 to 7.
Choppy and overcast but the cloud soon burned off. very
cool. During this period I saw 5 Red-footed Boobies and
a Masked Booby. At first there was only 1 Sula sula,
which circled around the ship collecting a second bird.
These were temporarily joined by the Masked Booby, then
2 more Redfoots which stayed with them, and the four were
joined by a fifth, the five flying off together. All were
dark phase. Ate breakfast and then out from 7:30
to 8:30. During the first half hour I saw 2 light-

Benedict's
1907

(211)

March 12 on board "Golden Bear". Coro Is. to San Diego, Calif.
Wedge-tailed Shearwaters together, a Mann's Shearwater
out at some distance, and a (Northern) Phalarope,
this very far out. During the second half hour
I saw 3 more Phalaropes, 2 together, plus a lone
Masked Booby, a Tropicbird (caeruleus & prob.),
and another (? Mann's) shearwater. All these birds
were fairly far off, and the Tropicbird was into
the sun. Went in to rest, and got out all the birds
from Ecuador to skin; spent the rest of the mid-
day - 10:30 to 2:30 doing this. The parrot was a
basterd, as the feathers were shabby and it was
in heavy molt on the dorsal tracts. The crop was
full of disintegrating seeds and greenish ? berries or
buds. The finches were all in good plumage except
the obvious tail molt of the one quusquit. The Yellow-
throat was the one brought in by Ted. Paperfuss. It
had dark bill & eyes, pink legs. About 12:30 the
ship began some practice manouvers, and shortly
after ^{Dr.} Ira Wiggins came saying there was a strange
bird outside. I stepped out to see 4 Masked Boobies,
3 Phalaropes and a nice adult Parasitic Jaeger (
no tail, little white on upper wing) which landed on
the water close to the boat. Later found out these
birds remained about for about an hour, then
disappeared. ? Blue present. I, however, was
committed to skinning at this time. Out again from
3:30 to 5:00 but 2 it became 1 as we went to off. Stand and

March 12 on board "Golden Bear", Coronado Is. to San Diego, Calif.
Time). From 3:30 to 4 saw only 1 masked
Booby, and 6-8 Porpoise which stayed to low in
the water ~~for~~ due to be able to see ~~any~~ much of them.
The next half hour was a little more wild. After
a ~~dark~~ ^{dark} phase Wedge-tail shear water and a Masked
Booby went past the bow, it was fairly quiet for a
while. (The shear water may be told by flight and
by the wing position ∇ vs. ∇ from the similarity
colored, and ~~of them~~ ^{of the} similarly flying dark Sula sula).
A school of porpoise far ahead had many birds
over it, which I could not figure out. As we
approached they became more and more puzzling,
until we were upon the flock. Most of them were
Parasitic Jaegers, possibly with 1 or 2 long tails,
(not at all certain) mixed in, and about a third
of the remainder were dark and semi-intermediate
phase (pale, not white, belly) Red-footed Boobies,
the flock totaling about 80-100 birds. Additionally
there was and adult and at least 1 ~~immature~~ ^{immature} Masked
~~Booby (white~~ ^{Wedge-tail} below, brown above with a faint collar,
dark bill + facial skin), a light-phase Wedge-tail
Shearwater, and an all dark Puffinus (sp?), plus
a dense group of 150 \pm 25 and 25-30 scattered (Northern)
Phalaropes. The large birds were circling over the
porpoise and only the boobies appeared to be diving.
The Jaegers were not chasing the Boobies, but may
have been working over the ~~Phalaropes~~ ^{Phalaropes}, which were

De Benedictis
1967

(273)

March 12 on board "Golden Bear" Coro Is. to San Diego, Calif.
sitting on the surface until the "Bear" approached.
~~The~~ flock split up momentarily as the bear went
through, and most dropped away, (not fled) from
the ship. The porpoise & fish disappeared com-
pletely. ~~But~~ ^{Ridgway} got a good look at the porpoise.
Afterwards saw 3 Red-footed Boobies together,
a Parasitic Jaeger, a lone Red-footed Booby,
and a wedge-tailed shearwater, full phase,
all more or less in the vicinity (10* minutes)
of the large flock. Between 4:30 and 5 saw 2 lone
dark phase Red-footed Boobies and another
Booby, very dark brown with a Brown Booby wing
lining - ? imm. Sula leucogaster. Saw no birds
after this in casual observation but a beautiful
6' ft swordfish was jumping completely out of the
water off the stern tail shortly after 5. Very few
flying fish, and almost only during the period
that there were no birds around. It was very clear
and calm in the afternoon, ideal observing con-
ditions. Wrote notes in the evening. Before I got up,
there was a Booby roosting on the fore mast boom,
which was shaken off by steering the ship hard
port then hard starboard. The presence of the Booby
alone was not the cause of the problem; it was shitting
all over the midshipman's fresh paint job. Went to
a movie after 8. Got to bed fairly early.

March 13. on board "Golden Bear", Coors Is. to San Diego, Calif.

Got up early and out by 6 A.M. Not much around. from 6 to 6:30 saw 2 Jaegers and a Red-footed Booby, the two jaegers together flying over the bow of the ship. from 6:30-7 saw a phoe phase Wedge-tail Shearwater, a Parasitic Jaeger and another Red-footed Booby, all these birds alone. Went down for breakfast, then out again. Saw only 1 Red-ftd. Booby from 7:30 to 800. from 8 to 8:30 there 1st appeared 2 Killer Whales, the largest 15-18 ft long at least, the other fairly much shorter. The tall dorsal fin and white mark on the rear of the head were clearly seen. Three solitary (Northern) Phalaropes came by, mostly fairly far out, and a single Parasitic Jaeger was seen during this period. Went in to 10:30; in the half hour after this time saw only 1 dark Booby and 1 whale, all far off. After this in rather close observation saw 4 Phalaropes, a Tropicbird (Red bill) and another dark Booby. Between 12:30 and 1 saw 3 Red-ftd. Boobies, all which appeared to have a white head and brown wings & body. They were far out, two together, the other seen sometime later. Saw a mottling Black Petrel during this period; this is the 1st Black Petrel I have seen with gaps in the wings. After 1 we began maneuvers and I went in for most the rest of the afternoon. 2 Brown Boobies

March 13 on board "Golden Bear", Coco Is. to San Diego, ^{Calif.}
both adults went past at this time. The unidentified dark Boobies seen earlier may have been immatures of this species. In the afternoon for about 4 to 6 a Parasitic Jaeger was following the ship and I saw 2 others pass the stern. Did not have a continuous watch in the evening. It was cloudy and windy in the early morning, ~~we changed from S to N again~~ cleared up and became quite pleasant, and then clouded up in the evening. Read Silent Spring after dinner and went to bed early. Our noon position was: $16^{\circ}24.5'N$, 101° , $16.0'W$, course 307.4° , off Acapulco. Mex.

March 14 a rough windy day today. The ship is taking it easily, however. Could see the coast of Mexico (Guerrero & Michoacan) to the east. From 6 to 7 did a keep an accurate count - the bow is being painted and I can't get to my usual place. During the period I saw about 15 Brown Boobies, mostly in twos & threes, an adult Masked Booby, 3 definite & 2 probable Pomarine Jaegers (intermediate phase with short tails following the ship), 2 Mann's Shearwaters, and 5 Wedge-tail Shearwaters. After breakfast did a more careful count. from 7:30 to 8 saw 5 Jaegers, 2 diff. Pomarine, the rest prob. the same. 1 Mann's Shearwater (2 groups of 3, 1 alone), ^{a Black Petrel} 3 Sooty Terns and 54⁺ Brown Booby. All but 5-6 of the latter were adults; the largest group ^{was}

March 14 on board "Golden Bear", ~~San Diego~~ ^{Coro Is. to San Diego} Calif.
of 9, then 6 (twice). There were some scattered
aggregations but not groups in the sense of
birds separated by less than 1 wing span as the
9 were. The distribution of all birds was irregular.
The three Sooty Terns were together. From 8 to 8:30
Saw 36 Brown Boobies, another Sooty Tern and
1 Wedge tail Shearwater. The Boobies were distributed
much as before. They are mostly flying out from
shore and don't approach the ship as often as
Red-foots. Discontinued a careful watch and was
unable to do much the rest of the day. About
10 Schuster pointed out a feeding assemblage
of 200-300 Brown Boobies, with prob. as many
Mask Shearwaters below them. Saw atleast 1
Jaeger here, nothing else, and saw a few
more Boobies and a couple more Mask
Shearwaters. Spent most of the midday skinning
the birds collected March 8. All the Pinnipeds
had completely unossified skulls as far as I could
tell - the dark ♂'s skull was much broken and I
could not be sure of it. They were somewhat gone and I
attempted no stomach content analysis. The only molt
noted was traces in the femoral tracts of 2 of the young
birds. The yellow Warblers were in top plumage; legs
pink. No molt on the Gygis, but it lost feathers easily.
It had an asymmetrical scar on one side of the base of
the neck. The blue on the bill had already almost

March 14 on board "Golden Bear" ~~San Diego to~~ ^{Cross Is. to San} Diego, Calif.
Completely fabled. Didn't get out in the evening, wrote
notes, read "Inherit the Wind", went to a movie
and to bed. Yesterday at noon our cabin fumigated
because it was discovered that Volkswagen had 4
bugs with Chuga's disease on board. - the bugs
were ditched. Saw about 100? Bottle nose
Porpoise and a whale (sp.) in the A.M. today,
later. Skinning should begin to ease off now.

March 15 Got up early and went out for a while. Quite
a bit going on. Still can't go to the bow. There
were larger #s of Mann Shearwaters and Northern
Phalaropes around, although the birds were in
small groups. During the early morning birds
were almost constantly in sight. The phalaropes
were all in winter plumage as have been all the
others I have seen so far. Most were meandering
along in the direction of the ship is sailing. Saw
about 150 phalaropes and ^{2x ~~three~~ times as many} ~~as many~~ Mann Shear-
waters during the first hour plus about 26
(6, a flock of 20*) Sooty Terns during the 1st
2 hours (6-7, 8:00-9:00) that I watched, nothing
else. After nine got some birds out of the freezer.
Glanced out a port hole and saw a humpback's Petrel
and a whale (? grey whale. a tall st. spout.).
There were two or three whales in the period
before. Most of the birds were roughly clumped
in a 45 minute period around 6:30. Saw very


DeBenedictis,
1964

(248)

March 15 on board "Golden Bear", Cocos Is to San Diego, Calif.
little after about 8:30. By 10:30 the birds I got
out of the freezer had thawed. Three Nesotrichus
had a orange-flesh lower mandible and an orange
mouth lining. It was in heavy molt on all body
tracts and several primaries were being replaced.
I am having trouble with the Pinaroloxia skulls,
for the air space is becoming fluid-filled and appears
single layered. The ^{black} ♂ skinned yesterday may have
been in the same condition. ~~Two~~ ^{Two} showed some signs of
molt on the head, but nowhere else. The stomachs
contained gut but no recognizable food remains.
The one skeleton today (#388) was a ♂ in full black
plumage with a black bill, like #s 379-380. The
other (#389) was in immature plumage, and had
a yellow bill. In all the ovaries were small and
showed no signs of activity. The testis were firm,
but not discolored (as was the smaller one of the
flycatcher). Spent most of the midday skinning.
By the time I was done the tip of Baja Calif. was
visible and we passed fairly close to the cape, so that
the Tuna factory and light house were clearly visible.
There were about 175 ± 25 Marx Shearwaters about
when I came out, but these soon disappeared
almost entirely and, except for one group of about 50,
I saw only 30 or so more in the next hour. They
were in very diffuse groups, mostly at some distance
from the "Bear" and flying parallel to it. With the

March 15 on board "Golden Bear", Cocos Is to San Diego, Calif.
Scattered birds were a # of similarly marked birds
with a much slower (half as fast) wingbeat &
which appeared to be larger (saw them together
only once or twice); They never came really close.
but from what I saw I suspect Pink-footed Shear-
water. There were almost all solitary. Saw ~~35-50~~²⁰⁻²⁵ of
these. Also saw 4 Northern Phalaropes, all in
winter plumage, and 2 Bonaparte's Gulls
during this period - 4 to 5 P.M. After 5 went to
the stern where a immature Red-footed Booby -
no trace of the Brown Booby Pattern in good light -
came close up, circled, and dropped off. Saw
little else until c. 5:30 when I spotted a good
plumaged Red-Billed Tropicbird on the water.
Besides this we also saw a large feeding group
of porpoises about 4:30, with few birds in assoc-
iation. They were light belied; several leaped far
out of the water. We are in the shipping lane
and passed at least 5 other ship while I was out.
It is much colder now and I am uncomfortable
without a sweatshirt on when outside, and do not
find it uncomfortable inside. We are told we are
approaching "P. pt" - the area near the cape
where the water temp. drops sharply and every
one pees instead of sweating. About 7 saw a large
Green ~~Turtle~~^{Furrow}: it was kaki colored, light, and
heavily spotted with black on the shell. Head light,

March 15 on board "Golden Bear", ~~San Diego~~ ^{Cocos Is.} to San Diego, Calif.
almost white below. Floating on the water. Began
seeing the floating red crows again - "plumoncodes" -
in smaller numbers than ~~last time~~ ^{on this trip}. up. Some
what surprised at how few shore based birds are
around. Noon position $21^{\circ}54.8'N$, $108^{\circ}57.4'W$. Course 308.1°

March 16 really "cold" during the evening and had to wear
a sweat shirt ~~and~~ a jacket in the A.M. Very windy and
choppy. ~~went~~ ^{went} out with Kieste from about 6 to 7 but
not much around. About 15 minutes after we got
out gulls began flying out from the nearby islands
off Magdalena Bay, Baja Calif. It was too dark
to identify most of them (about 50). I saw 3-5
definite Westerns (pink-legged), as many Herring
Gulls and at least 1 Calif. Gull. Off in the
distance there were 4-5 Mann's Shearwaters.
Porpoise were abundant here and came quite close
to the ship. They had a long thin back  and
a high dorsal fin $\approx \frac{1}{2}$ down the back. The back was
dark olivaceous brown; the tail + fins the same color.
The belly and side were white with a dark ~~mark~~ ^{mark}
from the eye to the fin. The top of the snout was pale
and ~~some~~ ^{some} of them had a ① white top of the head, the
color diffusely set off, ② a diffuse white Y, the
stem pointing forward to the blowhole, a ③ midline
dark top to the head, the patterns appearing in
= proportion. If all the group we saw were separate
we saw $150 \pm$ of them, no other species. No flying

DeBenedictis
1964

(251)

March 16 on board "Golden Bear", Coros Is. to ~~San Diego~~ ^{San Diego}, Calif.
fish at all; after breakfast saw 3-4 large gulls
and 20⁺ Bonaparte Gulls, the latter going in
a loose flock, nothing else. Didn't see anything
else except the few gulls following the ship after
this time. Took out the last of the Coros Birds
to skin. I discovered I had 2 more than I
thought - gave one to Kristen to skin and prepared
the rest myself. A ♂ in partial black plumage
had the skull unossified except along the sutures;
all the rest had all of the skull, except an area
near the paracymbium, as follows



Several showed signs of moult along the head and
neck region and in the central retinas. The stom-
aches of #384 + 385 both contained gill and unidentifi-
fable seed remains fully ground up. The two birds
prepared as skeletons were a young ♂ with yellow
bill & ♀ like plumage and an ad. male with full
black plumage. (#390-391). Saved one bird as an
alcoholic specimen. They have the nice long feathers
of the other geospines and are easy to skin. Their
fat is along all feather trunks, especially at the
vent and by the base of the neck, and is bright yellow
in color. Some have much intraperitoneal fat on the
belly. The ♂s with large gonads had firm, white
testis; the ♀s all had small ova, no brood patch
and did not seem to be breeding birds at this time.

DeBenedictis
1964

(252)

March 16 on board "Golden Bear", Crocs Is. to San Diego, Calif.
about 1:30 we had a pin drill and an abandon
ship drill - saw a very light imm. Herring Gull
and 2 Fulmars at this time. We then began
docking and spent the next two hours going in
circles. About 3 saw another Fulmar. Went
out a little after 5 - saw about 10 Northern
Phalaropes flying along in twos ~~the~~ 5's going
north. All seemed to be in winter plumage; no
gulls around at this time. The Fulmars were
in light intermediate plumage. Saw 2 whales,
the high spout ~~and~~ and 1 jumped out so the tail
cleared water when it surfaced, in the A.M. and
1 in the evening after 5. Although the day is rather
lost I have some idea what is around. More or less
free tomorrow. Wrote notes and went to a movie
in the evening. Tried again from staying up to late.
Born position today: $25^{\circ}25.6'N$, $113^{\circ}04.0'W$, course var.

March 17. got up in time to see both Cedros and the two
San Benito Islands. We were in the channel between
them, off Cedros & slightly S of the San Benitos. The
sun had risen by the time I was up and the light was
good from 6 to 7. There were good numbers of
birds out at this time. Large #s of gulls, mostly
from the nearby islands were about. Most seemed to
be Western gulls, flying to and from the San Benitos
and following the "Bear". Est. about 200 of these
were around. The next commonest species was Herring

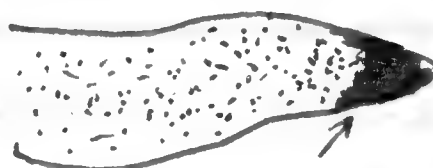
Benedict's
1964

253

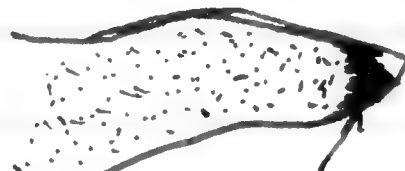
March 17 on board "Colden Bear", Cocos Is. to San Diego, Calif.
Gull with about 50 birds follow the boat & flying
about near by. least common was Calif. Gull,
with about 15 around, following the boat. I soon
worked out ways of telling adults of these species
apart from the underwing pattern, as in the
following diagram:



black trailing
edge =
L. occidentalis



black tip, almost
no white =
L. argentatus



black tip, large
white spot =
L. californicus

in addition the Calif. Gulls have a black spot
on the lower mandible lacking in the other
two species. Also saw a 1st year Glaucous-
wing Gull during this time. Procellariiform
birds were well represented by Mann's Shear-
waters which were flying W between the islands
and towards the San Benitos, mostly in 3's and
4's but also as single birds. Flushed one
group of about 50 from the water. They stayed
far off from the boat, and flushed at a good dis-
tance. Their #s were clearly decreasing towards the
end of the ~~day~~ ^{watch}, and when I went out a little later
I saw only a single bird. Most of them were 5 of the
San Benitos. I also saw at least 6 Fulmars
during this period, all in a grey-buff inter-
mediate plumage. 2 of them followed the ship
and one stayed the whole hour working along

Breed. 7 N's
1964

257

March 17

on board "Colden Bear", Coco Is. to San Diego, Calif
side to the stern of the ship, taking garbage
thrown over. Much to my surprise a Black-
footed Albatross appeared behind the boat.
It was an all dark bird except for the primary
shaft & the base of the bill feathering, and appeared
to stay with us the full day. I saw 3 small
alcids flying out from the San Benito with
the Mann shearwaters and later saw 2 Xantus
Munlets sitting on the water out at some distance.
We flushed a Northern Phalarope during
this time and there were about 10 Brown
Pelicans and a (Double-c) Cormorant in
this region. After breakfast went ~~down~~^{out} for half
an hour but saw little else. We passed a
group of about 500 gulls, in a large patch
& 2 smaller groups, which were resting & feeding,
distributed as following

400± birds

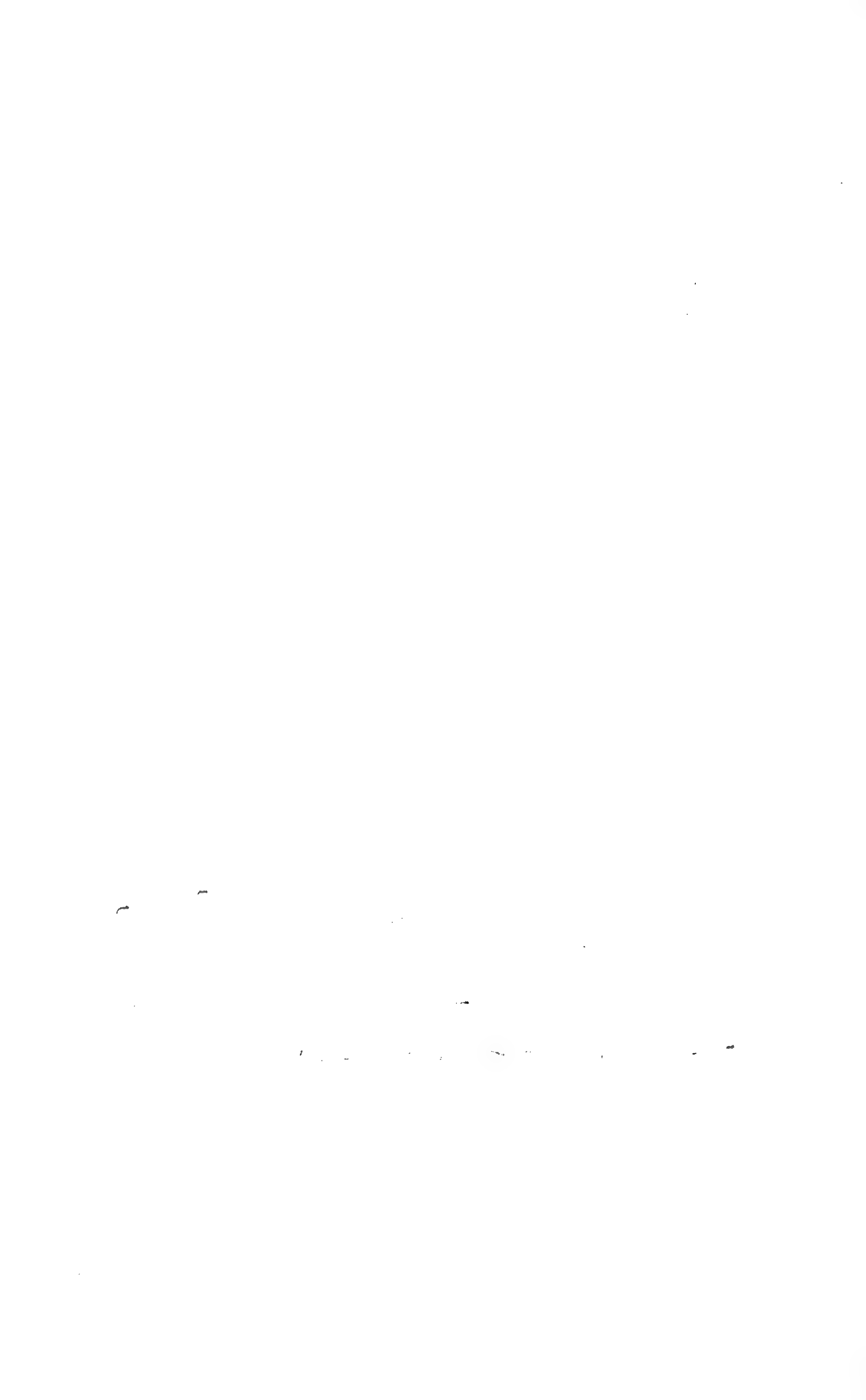
50± birds
~~40~~

Gulls in the smaller groups would sit on the water,
then rise up 4-6', then forward in down to grab
something in the water and sit down again.
About 1/3 to 1/2 the flock would go at once. The
large group appeared to be circling about contin-
uously, with birds on the water below, but may
have been doing the same thing. Calif., Herring
and West. Gulls were about equally represented in

DeBenedictis
1967

(255)

March 17 on board "Golden Bear", Cocos Is. to San Diego, Calif.
The flock, but the only other birds present were a Mary
Shearwater and a Fulmar. Saw nothing else
except the birds following the ship for most of the
A.M. There were about 4 Sea lions in the water
near the islands. Went out a little about
noon (1/2 before and after). There was still
an Albatross and a Fulmar with the bear,
and saw a Northern Phalarope with some
iridescent coloring on the neck. Lots of gulls
about, now mostly (80%) Calif. the rest = # of
Western and Herring. They are following
quite far back and often rest on the water.
Not much from the bow except a small orange
butterfly and a large ocean sunfish (Mola
mola). Didn't do much in the evening. About
3 saw another sea lion. A White-crowned
Sparrow (white-grey cres, orange-pink bill) appeared
near Bowman's birds eating spilled Bird seed,
and stayed the rest of the day. About 4 there
were 2 Albatross with the ship and about the
same time I noticed a small gull and went out
to see an imm. Rissa tridactyla following
the bear; it soon disappeared as did the
2nd albatross; a Fulmar still with us and the
gull proportions as at lunch. By 5:30 there were
about 100 gulls feeding there, flying about 1/2
towards the bow and then dropping back to feed



March 17 on board "Golden Bee", Cocos Is. to San Diego, Calif.
on some particle of food, then up and off again.
All stayed until dark although by this time the
Calif. gulls were heading towards shore in
3's and 4's, flying very rapidly. The albatross
feed in a circular path, mostly behind the
boat, and going far out (60 yards) from
the wake (where they usually feed) before
turning back. Both species landed with open
wings and were not ~~scared~~ ^{scared} 1/6 by the gulls.
As I was eating dinner a midship came and
told me there was a bird in Capt. Brownman's
cabin - went up to catch a nice-plumaged ♀
Audubon's Warbler, which I gave to Dr. Brownman.
Spent most of the afternoon relaxing and wrote
notes in the evening. Our noon position was
 $29^{\circ}21.8'N$, $115^{\circ}53'W$, course variable. Hendrick-
son and Walker are running around trying to ~~play~~ ^{goose}
everyone else, so things will be lively tonight. Very
tired and went to bed early.

March 18 got up early to see both the coast of Baja Calif and
the Coronado Islands. Not much was around except
Western Gulls, which were all over the place. A few
Herring and Calif. Gulls were mixed with them.
I soon spotted a Fulmar and 2 more came ~~by~~ ^{by} after
this. The 1st was a light phased bird, the others
dark intermediate types. Another intermediate
phased bird turned up after this for a while. An

March 18 San Diego, San Diego Co., Calif.

imm. Black legged Kittiwake turned up with the gulls and I saw it twice, once very near the harbour entrance. 2 Cassin's Auklets were seen flying towards the Coronado from the direction of Baja, and large #s of Cormorants, mostly Brandts with a few Pelagics and Double crests mixed in were near the entrance to San Diego Bay. Saw a loon in flight and about 10 at the breakwaters. The White-crowned Sparrow is still on board, and didn't leave until well after we docked. There are still hundreds of Surf Scoters in San Diego Bay, and I saw a few shorebirds and lots of Gulls on the way in. We docked about 10 A.M. and spent the A.M. getting hold of McCaskie at San Diego State, and the afternoon reading, relaxing, and getting used to civilization again.

March 19. Spent the day at the San Diego Mus. of Nat. History.

Saw all the birds McCaskie murdered ~~last~~^{last} year, and looked at the collection of Leach Petrels + 3 Oceanodroma tethys from the NE tropical Pacific. They are smaller than the Leach's and don't seem to have as much white on the ~~upper~~^{upper} as Galapagos Birds.

Looked at the terns: my bird is not. paradisea.

Went out around the grounds in Balboa Park: amazing how strange some common birds can sound: e.g. song sparrow. Didn't do much else.

DeBenedictis
1964

258


March 20

Vicinity of San Diego, San Diego Co., Calif.

Spent the A.M. at San Diego State then went with Guy McCaskie in the afternoon to look at birds. We went to the Tijuana River Valley, where we were unable to find much. Migrant Rufous Hummingbirds are present in hordes, almost to the exclusion of all other species; most are ad. ♂s; ♀s may be either sp. I suppose. However, in spite of the ♂s saw no aerial display; They chase a lot but don't seem to be as attached to any one spot as at Tilden Park. Saw Anna's here; no Black Chins or Costas. & no display. Guy says the Costas are through breeding and the Black Chins don't come in until April. Saw migrant Bullock's Orioles at one of the ranches. an imm. Golden Eagle along the cliff, a Western Kingbird, 2 Wilson's Warblers, a Chipping Sparrow and hordes of Lincoln Sparrows. There was a Snow Goose with some Teal at a Pond here. We then went to the Sewage Plant near Brown Field, where we saw in the ♂s of White-crown & Lincoln Sparrows an imm. White-throated Sparrow and a Swamp Sparrow, which Guy had been seeing since January. It was rufous on the back, grey unmarked on the breast, the pattern like a Lincoln Sparrow, and shy as all get out. We went back to Imperial Beach where we found a few Royal Terns with a group of Crows, and saw both Sage, ~~Virginia~~, and Clapper Rails.

P. DeBenedictis
1964

(259)

March 21 vicinity of San Diego, San Diego Co., Calif.
Went back to the Tianguana River Valley. Almost immediately Guy spotted a Cattle Egret which had been around since the 15th and we stopped and watched it for half an hour or so. It had black legs and a short yellow bill, with a long gular feather and  unlike a snowy egret. One bull calf was most interested in it and chased it about for 10 or 20 minutes. The #s of Rufous Hummingbirds were still present, and I saw a ♂ Allen and 2 or 3 Costa's as well. No display from any, but much chasing and some buzz display. Saw Hooded and Bullock's Orioles, Western Kingbird, Wilson Warbler, Yellowthroat, and Myrtle Warblers as migrants here + prob. 2 State-color Juncos and a white-throated sparrow. At Imperial Beach we saw a pair of Blue-wing Teal where we had seen 3 yesterday. Along the strand we found 8-10 Elegant Terns in full nuptial plumage. The crest was full & the plumage pinkish. They sat on the ground in an "erect posture"



and give a "kar-sick" call, tossing the bill up to vertical on the "kar" ^{syllable} and dropping it on the "sick" syllable. They were with Cassin Terns, which

DeBenedictis
1964

(260)

March 21

Vicinity of San Diego, San Diego Co., Calif.
ignored them, and Royal terns, which occ.
chase them away with a forward jab of the bill.
At a pool on the Sweetwater River we heard a
Western Flycatcher. Not much else of note
around except the #s of Egrets and Ruddy
Turnstones and Knots on the Coronado Strand.

March 22

Went to Mission Gorge in the A.M. where
we searched unsuccessfully for migrant birds.
A few hummers here, but still no display. A
large colony of Tricolor Blackbirds nesting in
the reeds and saw at least 5 American
B. Herons (Guy saw 2 in San Diego year). Went
to Presidio Park where we found few migrants
(Bullock's Orioles) and to the Mission Ponds
where we saw the ad. ♂ American Redstart
which has been wintering in the Pepper trees
where one was present last winter. We then went
to a feeder on Pt. Loma where we saw a
White-throated Sparrow, a 1st year ♂ Bullock, a ♀
Hooded, ~~and~~ a 1st year ♂ + 2 ♀ Orchard Orioles,
and an imm ♂ Summer Tanager, which have
been around all winter (~~which~~ ^{with} a few others that have
left.). From here we went to the sewage plant
at Solana Beach where we found large #s
of Snowy Egrets, a White-faced Ibis, 2 Lesser
Yellowlegs, a Ferruginous Hawk, 2 ♂ Purple
Martins, and a Vaux Swift, ~~the~~ latter in with

Benedict's
1964

261

March 22 vicinity of San Diego, San Diego Co., Calif.
a large group of White-thr. Swifts, and present at least
2 weeks according to McCuskie. We then returned
to San Diego Bay where we looked at shorebirds etc.
along the E side of the Bay. Saw a Peregrine
Falcon chasing shorebirds, lots of Snowy Egrets &
(including one in oiled ~~back~~ feathers), and
3 American Brant in with about 40 Black
Brant. The sharply set off ^{black} breast + pale belly and
the interrupted collar were easy to see. In about
500 Black Brant near by, there were no light-bellied
birds at all. Not much else about.

March 23. will leave for home this evening. Spent
the A.M. at San Diego State, the afternoon at
a feeder where a Dickcissel had wintered (gone
now!). Stopped by the museum of Nat. History,
and at the dump here, saw an adult Laughing
Gull which was molting in the black head. Got on
a bus in the evening and slept most of
the way home.

Species Accounts

Birds

Benedict's
1964

Coccyzus

23 Jan


1 mi. N. Academy Bay, Santa Cruz, Galapagos.
stomach contained one large grasshopper. Iris very
dark brown; bill dark grey; legs greenish grey, feet
pads yellowish. gape and mouth lining pink. heavy
postjuvenile moult on all feathers tracts. Peritonicum black.

L. Buedin's
1964

Craquus

Feb 18

Punta Suarez, Isla Española (Hood), Galapagos.

Spent some time watching a small group of Craquus.
2 birds sitting together on a ledge, each preening
itself, when one stopped, pulled the head in,
and tossed the bill up to vertical, 3 times, then
continued preening. No reaction from the other
birds. At the top of each toss it gave a soft "whew"
call. Another bird carrying a small pebble in its
bill circled slowly down to the cliff 
the wing $\frac{3}{8}$'s open and feet dangling,
first calling a rough rattle "clawit",
not loud, this changing into a whistled, soft
"kiew" as it landed out of sight. A pair on
a cliff together; one stretched the neck up and
forward 45° , the head and neck feathers erected,
and bobbed the head up and down 4-5 times
with the head to a bill down (pointed at the feet) posture, then normal.
Carpenter remained in. One of the pair being stores
again returned, carrying a small pebble, and
flew directly down to the cliff and landed near
another bird in brooding position. This bird stood
up while the 1st placed the pebble at its feet, then
both birds lost from sight but appeared to be preening.
Another gull came into a single bird sitting on
a ledge and went into an extreme bill down
posture, the bill against the head and the nape
exposed to the resident bird, then after a second

P. De Benedictis
1964

Guagrus

Feb 18

Punta Suarez, Isla Española, Galapagos.
or so went into a normal posture. Extreme
posture was something like



The 1st pair mentioned were standing together, one
nibbling on the nape and crown of the other.
The latter stood with the tail high, breast low,
bill down ^① and gradually went into a much
steeper posture, more extreme of the same,
then came out: nibbling continued for
a minute or so, always by the same bird,
then it quit and both birds preened the
scapulars and back feathers; shortly after the
preened bird went into a "sleep posture" ^②. -
postures -



The white base to the bill was quite conspicuous in the
sleep posture, and no obvious feather erection in
any of this. This pair has a $\frac{1}{4}$ grown downy young
which I can see occ. over the ledge. A pair on the
level c. 6 ft from me were quite alarmed and occ.
go into an oblique with a call from the rest
posture. The neck is retracted, the bill horizontal
and forward and the carpal in; the body looks

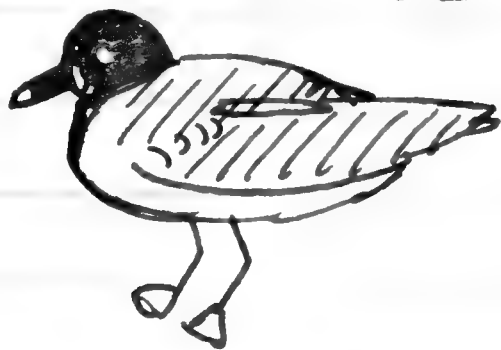
DeBenedictis
1967

Craquer

Feb 18

Punta Suarez, Isla Española, Galapagos.

[ad.]



the black head is very sharply set off from the grey mantle & a white

line shows on the ^{a l. the} end of the secondary. The head & neck are extended up and ^{a l. the} protracted, the carpals remaining in in all 8-10 cross watches, and the bill opened widely.

and the black cap does not contrast so sharply. The call begins with a rattle, dry and mechanical and goes to a whistle, the end of the rattle and beginning of the whistle overlapping



"
mmmm
rrrrrr
ee um aaaa h."

The rattle is almost like an inhalation while the whistle is produced on

an exhalation. This pair also has a $\frac{1}{4}$ grown downy young, pale grey, with spotted feathers coming in on the scapulae. This young crouched against a crevice next to the cliff. The parents "whistled" when I got near the young but didn't hit me or appear to attack. Saw one other bird give a bill up (head toss) too far away to have anything. Another pair, one was nuzzling in the nape and crown of another, which was in the not extreme tail up posture already described. There

P. DeBenedictis
1964

Creagrus

Feb 18

Punta Suarez, Isla Española, Galapagos.
quickly stopped and both began preening the
scapulars and back feathers for some time.
The birds spend much time preening these feathers
and the under wing coverts and axillaries.
They usually hold the wings up for $3/4$ second or so
when they alight. The forked tail is apparent
only when the tail is closed; when the tail is
fanned it looks quite rounded. Saw a # of
Creagrus sitting on the water a $1/4$ mile out
from the cliff. There is a lot of movement of
individual gulls during the day, but most
seems to be from one perch to another, and not
out to any great distance from the cliff. About
sunset and shortly after we saw 4-5 groups
of 20-40 Creagrus flying W plus several
smaller groups and single birds for a total
of about 200-300 birds going W in about 15
minutes. The flight was quite slow and
hesitant and the birds did not seem to be in
any hurry to go off. They made few calls; after it
was fairly dark heard one "wattle call."

DeBenedictis
1964

Cecropius

Feb 19

Punta Suarez, Isla Española, Galapagos.

spent about an hour⁺ watch about 15 pairs of gulls on the cliff in the inlet just east of the blow hole. The birds were fairly active until by the time I quit activity had decreased somewhat noticeably. Without a watch, I guess I was out from 9:30 to c. 11 A.M. Most of the behavior I saw was one or the other member of a pair chasing stray (I think) birds off a territory, which was small - 6 ft dia to a ledge on the cliff barely large enough for the pair. Saw almost no evidence of any forwards but a more or less direct attack was frequent, although I saw no cases of more than momentary physical contact between any two birds.

One gull landed on a flat ledge - 10-15' wide, near another. The latter extended the neck towards the former, opened the bill and walked towards the newcomer, opening the wing $\frac{3}{4}$'s of the way as it came close. The newcomer flew off as the resident bird approached.

A gull landed near a 2nd bird, 2 ft away. The 2nd gull pointed the bill at the first bird, which flew off. The 1st bird then returned to the former position.

A gull landed on a cliff, a 2nd gull already there, wing up, wing $\frac{1}{4}$ open, bill open, chased the 1st about a ft., then a 3rd gull in the same posture came out and chased the 1st 2 gulls away, it being in the same posture as the 2nd gull.

P. DeBenedictis
1967

Creagrus

Feb. 19

Punta Suarez, Isla Española,
The chase posture is:



At least 3 different birds are standing ^{up} with the head up, neck thin, bill open, slightly above the horizontal. The head slightly forward. Carpal exposed but against the body.



Birds hold this posture for minutes at a time does not seem to be equivalent to gular fanning as they will stand in this shape a next to bird in a normal posture

One quail flew at another a short (10[±] ft) distance away, neck forward, bill open, no carpal.



The open bill clearly shows the red mouth lining.

Dr Buechler
1964

Creagrus

Feb 19

Punta Suarez, Isla Española, Colón, D.R.

One bird standing, with the bill open - head up when 2nd bird landed 3 ft away. The 1st elevated and thrust forward the tongue, then bowed the head down twice, then chase ~~away~~ the 2nd bird with the wings out + up, bill pointed at 2nd and open. Bow was:



not sure of position of carpal. ? Looking.

If the threatening bird stands above the bird being chased away (this is not usual) then the head and neck are pointed down so bill is aimed at threatened bird. The head with bill open is sometimes preceded by an oblique and seem to bear extreme (typical) form of it -



the bird attacking opens the wing when it moves forward, ~~towards another~~ ~~to another~~ bird, the wing

varying from $\frac{1}{4}$ to $\frac{3}{8}$ open, always up with carpal forward (no other possible position?). The maximum opening of the wings occurs when the attacking bird is nearly in contact with the attacked birds. The wings open smoothly, often for a very short time. Both after an attack and after landing from a short flight the

P. DeBenedictis
1964

Creagrus

Feb 19

Punta Suarez, Isla Española, Galapagos.
wings are laid back in position then tossed
side to side 3-6 times, c. 4 times/sec., and the
tail is vigorously wiggled at the same time and
same rate. Birds standing with the bill open
and head forward a little seem to all have the
tongue thrust forward a little
but not raised noticeably.



A gull persisted in landing on a ledge near
a Blue-footed Booby which would point the bill
at the gull and shake the head up and down until
the gull flew off. Saw this half a dozen times. Gull
did not try to attack the Booby, or chase.

One bird chased another with the bill open,
head forward, wings out; 2nd flew off. The 1st stopped
and then looked at the feet. This seems to hide the
bill from above & in front and exposes the nape
line.



Carpals?

2 birds landed one about 1 foot, from the other on a
ledge about 1 ft. above the other gull. Both
pointed closed bills at the other for about 1 1/2
seconds, carpals out of their feather cover but against
the body, and dropped from the higher
rest position. One of the two then lunged at


1964

Creagrus

Feb 19

Punta Suarez, Isla Española, Galapagos
 the other with the wings and bill open
 and the second flew off.



before attack bird with head up and bill slightly open stands with tail slightly up, back high but not extreme. Carpals are in until it attacks bird . Saw 4 gulls do this, tail up about one inch. Carpals not moved until wing goes out. The neck is thick when bill closed, thins so head stands out as bill opens. The neck is thin in the rattle-whistle and when the bill is open ^{and} the head up and forward. Often when the neck is thick, the bird will not attack an intruder. The thickness of the neck seems to correlate with the tendency a bird will show to attack. A thin necked bird always attacks an approaching bird and birds coming in often veer off from ledges occupied by birds with thin neck, bills open.

2 birds with thin necks, carpals down, exposed (against the body) head up & forward, bill open, facing each other. After 2 seconds one attacked & chased away the other. A third bird with a short


1964

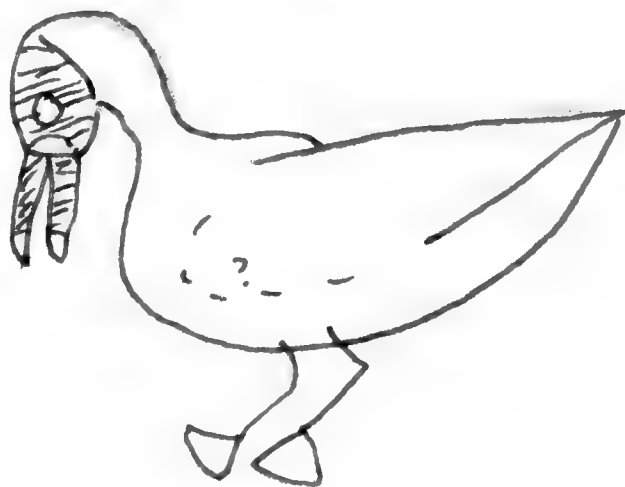
Creagrus

Feb 19

Punta Suarez, Isla Española, Galapagos
 thick neck walked towards the remaining
 bird, the bill curved at the latter, then
 extended and thumped the neck. The 2nd
 gull flew away. No wing opening except when
 the 2nd gull chased the 1st away. The dropping
 of the carpals seems to correlate with the height
 of the neck.

My total impression is of a graded attack
 display, in an "oblique" posture. Bill down
 are not infrequent and show the nape
 clearly. Seems to occur as often in isolation
 as during attack. Relation to attack not
 clear to me. Maybe an appeasement display.

About 5 birds were out on a ledge and
 3 were in attack position. One of these
 birds began to "choke" and 2 birds under
 a ledge 10-15 ft. away together choked.
 tail not very high, carpals? covered. The
 two together were oriented  Posture
 tongue?



a rough, forced
 whistle, "ee'eeah"
 accompanied the slow
 up and down move-
 ment of the head.

DeBenedictis
1967

Creagrus

Feb 19 Punta Suarez, Isla Española, Galapagos
a young bird begged in hunched posture
with a high sharp "pe'ek pe'ek"
call, a whistle. Plumage like the bird I
collected. It got no food.

Birds fly off the cliff for some time
and soar without much wing beating
going out 100-150 feet up 10-30 ft., the
wing are held



The feet often dangle. The bird soars out
in a single circle, a repeated (up to 8-10x)
circles or a figure 8 pattern and usually
returns to a roost near where it started.
There seems to be a # of unattached birds about
which move short distances along the cliff and
are (I suspect) the main birds being chased
away (by resident birds).

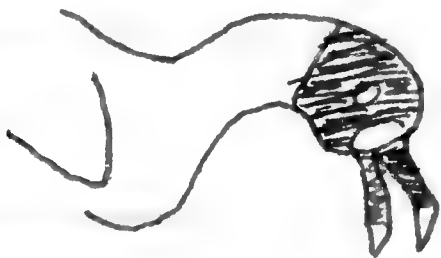
After a 1st bird started, 8 near by gulls
all gave the "rattle-whistle" call (~~~~~)
with neck out, thin, but open. The carpal are
not moved from rest position. Feather erection
seems to be minor, the back looks a little
higher than in rest posture.



De Benedictis
1964

Cecropus

Feb 19 Punta Suarez, Isla Española, Galapagos
one bird which had been standing alone on a ledge with head up and forward, bill open, for several minutes, opened bill moved neck forward and down & bowed 2-3 times and regurgitated a mass of fibrous tan colored food $\frac{1}{2}$ " in dia. on the bare rock, which was then left alone. The carapals dropped on the bow movements



The bird assumed a rest position shortly after this.

These were the only "choke"-like postures seen. Saw one bird alone toss the bill up to slightly beyond the ^{verruicle} neck in bill closed.


Two birds together on a small ledge 6-8 inches apart, one in rest posture other with neck c. $\frac{1}{2}$ extended, mostly up. The latter reached forward and nibbled the feathers over and behind the eye of the former, for $\frac{1}{2}$ a second, stopped, then swept the bill through the scapulars, assumed a rest position, then repeated nibbling on the auriculars. The 2nd bird remained in a rest posture the whole time and finally both moved about going farther apart and staying in rest or slight neck up posture.

De Benedictis
1964

Geospiza fuliginosa

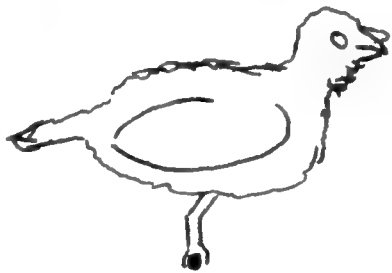
23 Jan

Academy Bay, Santa Cruz Is., Galapagos.

saw a pair copulate. ♂ came with wings outspread, fluttering, head high, all body feathers erect, large toe in & stretched, bill up, body down, tail up. male after flipped wing towards the ♀. ♀ posture
♂ wing  as such. ♂ sang before



1st copulation, ~~when~~ ^{when} ~~the~~ ^{the} ~~bird~~ ^{bird} ~~several~~ ^{several} times, then silent while mounted; cop. c. 1-2 sec., perched 3rd ~~sketch~~ ^{sketch} from ♀, mounted again after 2 songs, cop. 1-2 sec.; ♀ held posture whole time. after second she gave high pitched squeaking sound 1st sec. slowly arose to normal posture; ♂ perched with all feathers fluffed and head very high. wings in, tail straight, legs very high. ♂ legs very high during whole cop. c. 5-8 sec. before 1st cop., 2-3 sec. between 1st and 2nd. ♂ sang after cop 1st time. two perched for while, then flew off.



male post cop. posture. none of the while.

DeBenedictis
1964

Lathraea

21 Jan.

Santa Cruz, Galapagos arch. (#281)

bird brought in with another by an unidentified Ecuadorian about 7 P.M. Jan 21. died the evening of Jan 23, prob. of starvation, other alive at this date. Iris deep (brownish) red, bright; legs dull flesh color, upper mandible dark grey, lower greyish olive. skull:



left testis whitish-olive,
right testis yellowish,

misshapen; fairly heavy advanced molt ~~on~~ the dorsal tracts skin very tough and hard to remove from the back. heavy musculature on legs, little on wings. Crop contained 3 small bits of gravel 2-3 mm in dia.

Nannopterum harrisi

26 Jan

Pl. Esmerosa, Fernandina Island, Galapagos.
 Began a watch at c. 3.15 P.M. overcast and slight wind,
 still some sun. 7 birds at the point, spaced:

① → ② ③ ④ ^{sun} ⑤ ♂ ⑥ ♂ ⑦ ♂ - bill pointed

all but 1 (asleep) gular fanning, rest posture is
 with body nearly upright, neck retracted in S-shape
 so bill rests on breast. legs ventile, both on the ground, wings
 folded, scapulars over humerus, carpals out:

bill points slightly down. A fairly common
 variation of this is wing droop so that the wings are opened
 and lowered against the side of the body.



About 3:20 ① walks c. 10' to the left, wings opened
 (for balance) when it jumps, in a U motion. Still well
 up on the corks near 3 sea (low). most of the birds
 preening breast and nape (oil gland) region intermittently
 for short periods. Started to rain. By 3:25 still raining;
 all birds #④ in rest posture. ③ stretched (opened) wing
 and flapped them slowly 3-4 times, rest extended,
 then shook head side to side, tail up c. 45° above
 horizontal.



② walked a short distance

3-4' with wings closed. didn't jump. balanced by tail raising
 both during and between steps. steps slow, clumsy looking
 and bird waddles considerably. 3:30 all birds in
 rest posture, fairly heavy rain. ① ③ ⑤ ⑥ all
 have the bill tucked down ^{under} the scapular region

Nannopterum harrisi

26 Jan

Pt. Espinosa, Fernandina Island, Galapagos.

birds shake the head frequently in the light rain.

② moved down to a lower spot, waddled with closed wing except for 1-2 ft jump down when wings opened. All gulls fanning stopped in the rain.

about 3:35 heavy rain. all birds with bill under the wing. posture is:



all keep the wings closed during the rain, don't move much. 3:50 ② went into the drink. Surf very

heavy but cormorant has no trouble in it. #6 (same bird?) back in original location. Dark bird in the surf (#1), dove low, body high but not out of H₂O.

Sea lion came through the group, walking. Cormorant dove by looked at it but didn't move. #1 and #6 at least are banded. #1 was small, dark back, with a bright (dull pinkish red) bill. # large, brown below.

Still raining at 4:00. 1 bird in the surf. 3 to 5 ft high breakers on the rocks. Bird dove very low, body not coming up at all. Having trouble with the bird (a tarp) in the wind and over water water not at all at 4:15 relieved by Dr. Miller. birds spaced.



Benedict
1964

(1)

Nannopterum harrisi

27 Jan

Pt. Espinosa, Fernandina Is., Galapagos.

relieved Dr. Miller at 7:20. 4 comorants, 1 going into the water, 2 asleep, 1 preening. One on one foot only, the other foot curled up. have seen this posture yesterday A.M.




birds.

#1 #2 #3 #4 H₂O
□ □ □ □

#4 gone rest of A.M.

7:35 - #3 moved down towards the ocean, then lay on its belly, wings closed. Other 2 awake and preening, occ. going back to sleep posture. 1 bird in surf c. 200 yards out from the most distant rock, diving. 7:40 2nd bird on the belly. posture is:



#3 has back to sun, #2 is oriented  sun
#1 standing with back to sun, preening belly and breast feathers. 7:45. #2 standing and preening belly, turned to face the sun. when it took a step the tail ^{tip} lifted c. 6" off the ground. prob. to prevent abrasion when the tail moved rather than for balance
#3 moved closer to H₂O. a small dark bird came ashore, moving to about the last point #3 stood. will be called (new #1), 7:48. walking slowly lifted head and bill and shook back and forth 1st the bill, then the neck, then



Nannopterum henrici.

27 Jan Pt. Espinosa, Fernandina Is., Galapagos.

the wings (wing flapping), then the tail. closed the wings and after c. $\frac{1}{2}$ minute walked towards the 2 other birds (#s 1 and 2) with the wings open


7:50 seems to be alert. shook again, back to the sun.

wings open, preening breast. full scanning position:




going to

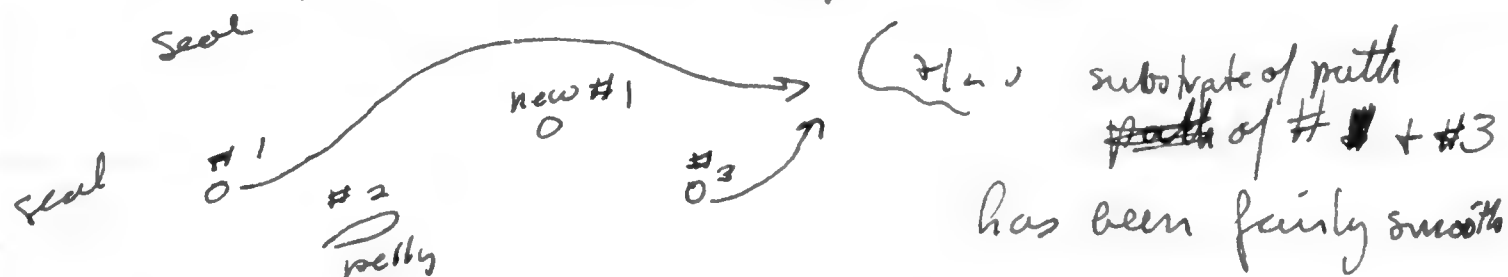
going to oil gland. still

flapping wings a little. #3 low but still on shore, preening. new #1 preens mostly by rubbing the bill and head over the body feathers in a side-to-side motion, instead of scribbling. can reach breast, back, and flank feathers like this preening: . Most

other birds make conspicuous nibbling movements while preening. 8:00 new #1 closed wings to scratch head, then fanned them again. #1 walking slowly to H₂O

not jumping and wings closed. another commenced swimming near the shore but didn't come ashore.

Birds walk with wings closed except for short jumps when wing more  for balance. Same motion I would make with my arms when I jump long distance. #1 and #3 now together. #2 on belly still (again). birds swim



8:05 #1 went in, swam out under H₂O.

1964

(3)

Nannopterum harrisi

27 Jan

Pt. Espinosa, Fernandina Is., Galapagos.

8:07 #2 stood up, back to the sun. large, banded, preening belly feathers. new #1 with head down, preening, wings now low but still out →

8:10 wings nearly closed,

slightly out from the body →

#2 moved back to sun. made 6 slow movements, smooth, moving from rest position to tail down and out towards the foot, lifting the tail each time, (? blowing salt), then began preening movements on the rump and back.

each movement about ^{second} ~~first~~ seconds long.

new #1 closed wings.

8:15 new #1 back to sun, preening flanks, wings closed. 8:24 a large dark bird came out, shook at water's edge, slogged up 3-4' to higher pt, shaking the wings slowly. ← new #2. new #1 asleep. #3 at water's edge, new #2 not fanning wings but flapping occasionally.

8:26. wings fanned, neck stretched upward as wing flapped 2 times. banded. #2 still preening. stretch movement as follows, once:



#3 alternating sleep and lower flank preening movements at ocean's edge. new #2 preening occasionally. preening position → tail slightly spread, back to the sun





DeSenedictis
1964


(7)

Nannopterum harrisi.

27 Jan

Pt. Espinosa. Fernandina Is., Galapagos.

8:31 another comarant came out (new #3) shook head and bill, wings a little, then flapped wings and preened, wings out. stayed about 3' from H₂O. new #1 awake, preening belly. new #2 scratched head, wings closed, then fanned wing again at 8:34. #2 subalternating sleep posture + preening, new #1 preening, walked 6 ft. toward #2. new #2 + new #3 still sunning. #3 in rest posture  at ocean's edge. new #2 stretched upward opened bill.  head scratching fairly frequent.

the head is moved down to the side of the breast and the foot raised out and up to the head. wings not ~~moved~~. posture is approximately. 

8:40 new #3 preening with wings out, scapular region. new #1 asleep. #2 preening breast feathers #3 preening rump area. new #3 preening by both bill rubbing and nibbling, in 2 = amount of each. ^{new} #2 occ. fans wing with head in sleep position. new #2 stretched bill up, opened, walked toward new #3, and extended neck with open bill at new #3. she latter jumped up. 2' to a ledge, wings open when jumped, and continued drying out with bill ^{against} scapular region. 8:44 #2 again lying on belly. #3, new #1 preening; new #3 nibbling and sunning. positions

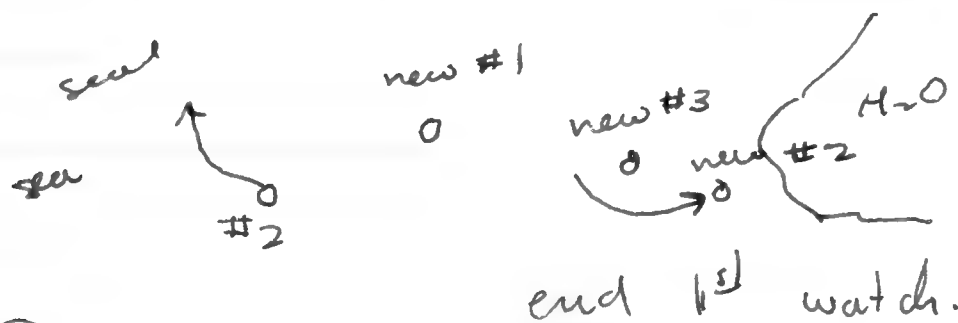


Nannopterum harisi

27 Jan Pt. Sopinka, Fernandina Is., Galapagos.
 new #3 almost closed wings while preening, then opened.
 new #2 wings almost closed at 8:45



8:46 #3 went in, swam on surface 6-8' then dove & lost to sight. new #2 and new #3 are both banded.
 8:49 #2 up, all back to swim. new #3 wings closed.
 8:50 it (new #3) and new #2 in sleep posture. Relieved at 9 by Dr. Miller. new #2 moved down toward H₂O, #2 started towards seal. positions when I left.



Began 2nd watch about 11 A.M. Dr. Miller gave me the following sequence of birds.

6 9 10 7 4 15
 11 12 14 2 13


9, 11, 12, 2, & 13 were banded, 4, 15, & 14 not banded.
 14 & 15 were sunning and preening, 9 quacks preening, not sleeping or preening. 13 also sunning a little.
 13 with wings , 14 & 15 with wings
 11:05. 10 sunning. 6 moved between 12 & 14, flipped wings when it hopped; shook wings and head when it arrived.

#11 to between 12 & 6: 12 then went to it of 15.

Nannopterum harrisi.

27 Jan

Pt. Espinosa, Fernandina Is., Galapagos.

11:12 15 + 14 preening, 11 gular fanning, #12 voided
as it passed 4 + 15, posture 

11:15 9, 10, 11, 6 preening; 14 + 7 asleep, 15 sunning,
rest asleep. alternate preening with sleep all the
while.

11:22 #7 went in ocean. stuck head in H₂O, then
out, then shook it, swam 4-6 ft., dove and out of
sight. not banded. #12 sunning, in sleep position,
#11 gular fanning. #15 asleep, rest preening

11:35 - #16 came ashore with 8" piece of seaweed
in the bill, went straight to #15 and flipped head up
releasing the seaweed, with sailed on by 15 to one side.
then began to sun. distance from H₂O to #15 = 25'.
didn't seem to use wings to balance when it came out of
the H₂O.

tide coming in and suddenly 4-5 birds move at
once. lost track of most of the left hand group. both
15 and 16 sunning, 16 preening alot.

11:50 a small unbanded bird (from left group)
walked to water, hesitated, stepped forward, then fell
on belly in shallow surf (1-2" deep) head under the water,
then swam on surface, head up 10-12 ft., and dove
out of sight. #15 + 16 both sunning, #15 with wings held
very low.

12 noon. unbanded bird from front left group went in.
and small brown unbanded bird to the left of #15
large banded bird came out and went to between #15

DeBenedictis
1964

(7)

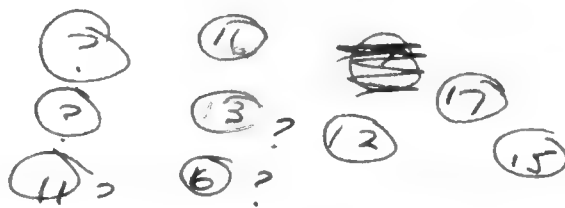
Nannopterum harrisi

27 Jan

Pt. Espinosa, Fernandina Is., Galapagos.
and the above, sunning but little head and bill shaking
#16 has wings out. #17 sunning.

12:30 a large dark banded bird from left group
went into the ocean.

12:35. Believe #2 and not #12 went in earlier.
position.

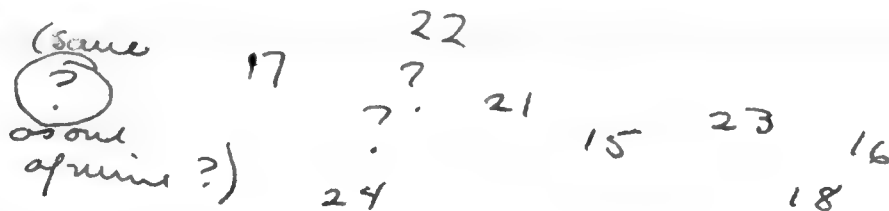


See Dr.
Miller was
for birds
at this
time.

ended this watch

2:15: began third watch:

Dr. Miller left me with



#4 arose about 2:10; dove once, surfaced, dove
again and appeared on a rock ledge when surf went
out, then walked ashore. sunning with wings by
2:15

2:25 - helicopter came in to deliver 3 more persons
to camp. as they approached, the birds moved into
the water from left to right except #24, 23, 16, 18.

2 birds ^(#29, 30) came out almost immediately. renumbered
all but 1, which ~~should~~ ^{sketch} called A, and stayed out
of H₂O. #26 prob. stayed out of H₂O, #30 prob = #24.
about 2:30 one more came in & then went out
as the choppers went out again. by 2:35 #29+30
sunning again, about 2:37 #31 came ashore

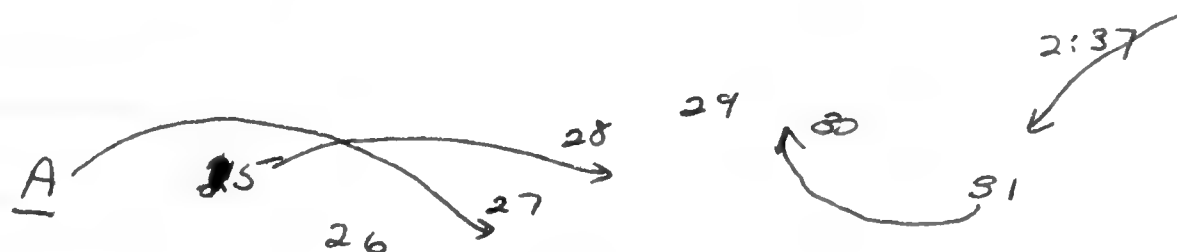
De Benedictis
1964

(8)

Nannopterum hurisi

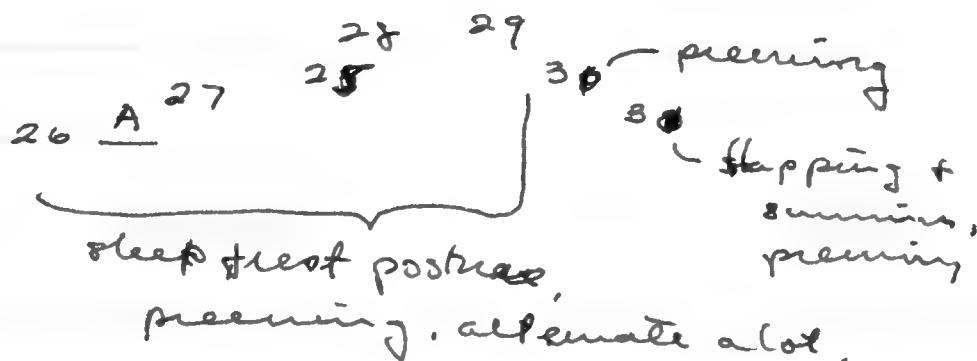
27 Jan

Pt. Espinosa, Fernandina Is., Galapagos.
movements and positions ~~at~~ ^{to} 2:30:



(2:37 cont) and moved between 29 + 30, shook off, and moved ^{in front of} ~~between~~ #30.

activities at 2:40:



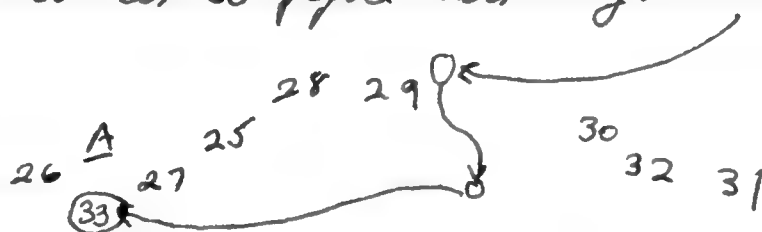
2:48 #31 was sunning, rest preening + resting.

(#32) 2:50 large, ~~dark~~ ^{brown}, unbanded bird came in as:



sunning started after little shaking. Dove before ledge, but little surf. came up at edge of rocks, jumped up and walked to between 30 + 31.

2:51. #31 + 32 preening and sunning. #33 arrived and wandered as so before settling:



#A, 26-30
preening, rest,
sleep.

came in at 2:55, small, dark, banded, flapped but did not sun until c. 2:58. Both #31 + #32 sunning,



DeBenedictis
1964

9

Nannopterum harrisi

27 Jan

Pt. Espinoza, Fernandina Is., Galapagos.

#31 with wings  #32 wings 

Overcast. may rain. at 3:00 #31-33 were
sunning, #25-30 + A sleeping, resting or preening.

3:07 only #32 + 33 sunning. 3:10 only #33

has wings out. held very low 

3:19 large banded bird came in to left ~~channel~~ ^{channel},
dove, surfaced at rock ledge, waited for wave trough
then jumped c 2' using wing for balance and walked
to the left of the group, shook + flapped a little.

sunning by 3:24.

at 3:25 A walked rapidly to water's edge at
right side and jumped in. #10 sunning. This
continued without interruption: birds spaced, only

34 25 28 29 30 31
26 37 32
33

#34 sunning, rest preening and resting until
c. 3:40 when #30 went to water ^{at right} and
jumped in. #34 still ~~pre~~ sunning. relieved by Dr.
Miller c. 3:45 for rest of day or so.

additional notes. Once during the noon
session when the birds were forced up, one was seen
to chase another briefly with the bill closed or slightly
open. This was just about the only interaction observed.
"Personal space" seems to be small and the birds
semi gregarious. In the water they are mostly just out-
side the surf 50' to 200 yds. out.

DE BENEDICTIS, PAUL

Miscellaneous: California and foreign

April 26 - October 6, 1964

Catalogue Nos. 393-433

Journal

Catalogue

eBenedict's
1964

Calalog

~~393~~ N. end. San Antonio Valley, 1 mi. N (by road) Junction Del
Puerto Creek Rd on San Antonio Valley Road, Santa Clara Co., Calif.

April 26, 1964

393. Phrynosoma coronatum

Del Puerto Creek, 450[±] ft., 5.8 mi. W, 0.3 mi. S Patterson,
Stanislaus Co., Calif.

394 Thamnophis elegans ^{MAY 17, 1964} (atratus) 902-701 mm

Dry Creek, 550[±] ft., 2.1 mi. S, 1.6 mi. W Oakville, Napa Co., Calif.

May 20, 1964

395. Thamnophis elegans (aquaticus) 342-256 mm. 10.4 gm

SKIN + SKELE

396. ♂ (testis 19 mm; epidid) " " 584-435 mm. 42.7 gm

SKIN + SKELE

397. ♂ (testis 14 mm; epidid) " " 564-414 mm. 46.4 gm

Westpond, Imperial Dam, Imperial Co., Calif.

June 6, 1964

To SDMNH

398 ♀ (ad. sk) Cassidix mexicanus no wt. little fat. (sev. foll.)

no modt. (collected by R. Guy Melashie)

Wheeler Island, Suisun Marsh, Solano Co., Calif

May 23, 1964 (collector George Ferrell)

399 ♀ (ad sk) Melodia melospiza no wt (largest large, 1⁺ foll.) = #6 G.F.

400 ♀ (ad. sk) " " " (largest ova 3 mm) = #7 G.F.

401 ♀ (ad. sk) " " " (largest ova 2 mm, sev. foll.) #8 G.F.

402 ♀ (ad. sk) " " " (largest ova 2 mm, 1⁺ foll.) #9 G.F.

403 ♂ (ad. sk) " " " (testis 9 mm) #14 G.F.

P. DeBenedictis
1964

Catalog

Wheeler Island, Suisun Marsh, Solano Co., Calif.

May 23, 1964 (collector George Ferrell)

- 404 ♂ (ad. sk.) Melodia melospiza no wt. (testis 9mm) #16 G.F.
405 ♂ (ad. sk.) " " (testis 8mm) #17 G.F.
406 ♂ (ad. sk.) " " (testis 8mm) #18 G.F.
407 ♂ (ad. sk.) " " (testis 8mm) #22 G.F.
408 ♀ (ad. sk.) " " (ovary in poor condition) #23 G.F.
409 ♂ (ad. sk.) " " (testis 10mm) #26 G.F.
410 ♂ (ad. sk.) " " (testis 9mm) #27 G.F.

These song sparrows were all collected by Ferrell as part of his thesis work and skinned by me. They had been opened - widely - by Ferrell & drained of blood when received, and were 4-6 days old. The G. F. number corresponds with the # in his note book ^{for this date}, except that I recorded two #6's; the assignment here is based on the wing measurement recorded by Ferrell.

0.5 mi. ENE Scissors Crossing, San Felipe Valley, 2200 ft.

San Diego Co., Calif. July 3, 1964 (coll. by C.W. Brown)

SKIN + SKELETON

- 411 ♂ Rhinocerosaurus lecontei 387 mm S.V.L. (testis 6mm)

San Blas, Nayarit, Mexico (collected by Sam McGinnis)

late Aug. 1964 total S-V.

SKIN + SKELETON

- 412 ♂ Iguana iguana 134.5 gm. 681-180 mm. testis 4mm
SKIN + PT. SKELETON
413 ♂ Ctenosaura pectorata 111 gm 528-173 mm testis 5mm

both animals dead for some time when weighed.

Benedictis, P
1964

Calalogue

Southwestern Research Station, 5400', 5 mi. w Portal,
Chiricahua Mts, Cochise Co., Arizona.

SKIN + PT. SKEL Aug. 1964 (collected by L. La Pie)
414 ♂ (testis 7 mm) Geckonotus kingi 9½ gm total S.V. 222-94½ mm tail regrowth
SKIN + PT. SKEL. 415 ♂ (testis 8 mm) " 8 gm 180-93½ mm tail. regrowth

these specimens were received with a # of
animals for illustration for Dr. Stebbins Field Guide
prepared Sept. 14, 1964.

No data; presumably South Africa

rec'd from Calif. Acad. of Sci.

SKIN + SKEL 416 ♀ Chameleo taeniobronchus 163-83 mm. (ova 10R 94 largest 1½ mm)

No data; presumably Eastern United States

rec'd from Calif. Acad. of Science

SKIN + SKEL 417 ♂ Ophisaurus ventralis 381-127 (testis 4 mm)

SKIN + SKEL 419 ♂ Heterodon 35-43½ cm. (testis 24x8 mm)

No data; presumably South America.

SKIN + SKEL 418 ♀? Leptophis 123½-77 cm.

SKEL 420 ♂? Ceratophrys

SKIN + SKEL 421 ♂ Epicratis cerchoa 70-62 inches.

SKIN + SKEL 422 ♂ Tapinambas nigropunctatus 87½-32½ cm.

SKIN + SKEL 423 ♂ Dicranaea guianensis

x Benedictis, Paul
1964

Calalogue

Mendoza Ranch, 0.3 mi. NE Pt. Reyes School, Pt. Reyes, 120',
Main Co., Calif. (collected by R.O. Parker)

Sept. 27, 1964

423 ♀ (imm.sk) Dendroica striata 11.9 gm. heavy fat

424 ♀ (imm.sk) Dendroica castanea 11.6 gm. heavy fat.

the legs of both these birds were pinkish in life, becoming yellowish when they were shot. the leg of # 424 became grayish about an hour later, while the legs of # 423 remained yellowish. Both sexed with binocular microscope, gonad in good condition - single, folded, granular organ below adrenals on left side only; both with skull only about 1/2 ossified.

424 contained 1+ large dipterans in its stomach.

Ban Francisco Bay Shore, Frontage Rd near Ashby,
Berkeley, Alameda Co., Calif.

Sept. 26, 1964 D.O.R.

425. ♀ hauis occidentalis 802 gm. no fat

legs dark gray-black; bill and eye black. Hit by a car, fresh, when found.

~~426~~ Pt. Bonita, Main Co., Calif.

Oct. 6, 1964 collected by Richard W. Stallcup

426 ♂ imm. sk. Dendroica magnolia 7.8 gm. little fat testis minute skull c. 1/2 ossified; found in cypress trees near the light house (above Nike station) where an adult was collected last year on the same date. Bird named its trail according to Stallcup.

DeBenedictis
1964

Catalogue

Drake's Beach County Park, Pt. Reyes, Marin Co., Calif.

Oct. 1, 1964 (collected by R. W. Stallcup)

427 ♀ (imm. sk.) Dendroica palmarum 10.9 gm. heavy fat ovary inactive

Muddy Hollow, 2.7 mi. W, 0.8 mi. S Inverness Park,
Marin Co., Calif.

Oct. 1, 1964 (collected by R. W. Stallcup)

428 ♂ (imm. sk.) Dendroica striata 16.3 gm extremely fat testis ^{inactive}
legs black in life. The bird was in poor condition
and the gonads soft even under ~~a~~ 15x dissecting
scope. Only one gonad, on the left side, could be
found, but this was round, ^{even textured} ~~smooth~~, unlike ~~the~~ ^{an} ovary.
The right gonad and adrenal were ~~at~~ ^{ingrowing}
indicating damage to this side of the body.

3.0 gm. of ~~hard~~, greasy, white subcutaneous
fat were scooped off the skin; all fat on other
birds was yellow. Since there was additional fat on
the skin + in the body cavity, the bird must have
been about 25% fat by wt. - the fattest bird
I have yet handled.

isolated grassy pond at N. end Bolinas lagoon. Marin Co., Calif.

Oct. 6, 1964

429 ♀ Erolia bairdii 37.4 gm. little fat ovary inactive

some body molt towards head + lesser wing coverts.
skinned



DeBenedictis
1964

Catalogue

SKELE.
430 sex? Michoacan, Mexico. (Collector T. Papenfuss)
Enaliosaurus clarki

presumably from Australia

SKIN+SKEL.
431 ♂ Acanthophis antarcticus no data (rec'd from Steinhart Aquarium)

presumably from Africa

SKIN+SKEL.
432 ♂ ? Boonslang no data, (rec'd from Steinhart Aquarium)

presumably from South America *

SKIN+SKEL.
433 ♀ Dicoussa guineensis ovary inactive
* no data; (rec'd from Steinhart Aquarium)
~~presumably South~~

Journal

DeBenedictis
1964

(1)

June 5

San Diego Calif to Imperial Dam, Colorado River, Calif.
took a bus to San Diego on P.M. of June 4 and arrived
about 4:30 A.M. Guy McCaskie met me, and went
to his room ~~at~~ ^{near} San Diego State. He took a flight,
and about 10:15 we took off for the Colorado
River. We went via Hwy 80, stopping briefly
at Jacumba on the way. Here was a tame
"wild Snow Goose" with some mallard and
5-10 pairs of Tricolored Blackbirds in a colony
of Redwings. They were carrying food and were
all silent. We went to the south end of the
Salton Sea near the mouth of the Alamo River.
It was hot and there was no landbird (except
Blackbird) activity. Almost no shorebirds (Avocets
and Stilts only) and a few Ring-billed Gulls and
Caspian and Forster's Terns (a dozen or so of each,
most of the Casps + Forster Terns in non-breeding
plumage). There were about 2 hundred
Black Terns here, about 80% in winter plumage
or advanced post-nuptial molt. There was
one each of Scaup, Crowsback + 7 Common Merganser.
At Ramer Lake there were a few Black Terns
and we saw 2 Fulvous Tree Ducks here.
Heard Cooties when + Albert's Towhee saw
a few Gambel's Quail, and 2 Pheasants. We went
from here to the lower Colorado River between
Bard and Imperial Dam. In the tall trees
near Bard there lots of white-winged and a few

P. DeBenedictis
1969

(2)

June 5

Lower Colorado River, Calif (Imperial Co.)
Ground Doves, and lots of Cowbirds. We looked for Wied's G. Flycatcher + Bronzed Cowbirds, but couldn't find any. From here we went to Laguna Dam, but found very little here. There were about 15-20 Cormorants in the Calif. Swamp, but no trees of any sort - very few water birds here. At West Pond, near Imperial Dam we found an Osprey, a winter plumage Bonaparte Gull, and a nice Franklin's Gull in good ~~st~~st summer plumage (throat white). We then looked in the trees behind Imperial Dam where we found a pair of Vermillion Flycatchers. Both birds were silent and busily capturing insects for a brood of 3⁺ young in a nest in a low Mesquite tree. They perched low in the tree-like mesquites and picked insects from the air or even from the ground, the foraging height being ground level to about 5 feet up. The nest was of small twigs, coarse in structure, placed in the crotch of some small twigs on a $\frac{3}{4}$ " dia branch $\frac{1}{2}$ ' from the ground and as far from the trunk. The nest was well shaded. The young are well covered with white down & are able to poke out of the nest. From ~~Laguna~~ Imperial Dam went back along the Colorado River, taking a side road just below the dam (where we found a pair of Summer Tanagers and several Ash-thr. Flycatchers), and

June 5

Lower Colorado River, Imperial Co., Calif.
another road just above ~~La~~ ^{La} Laguna Dam. Here
in Dense, tall (10-30') mesquite, willow
we found birds becoming active for the evening.
There was a Pair of Cissal Thrashers here
(silent), many Veeries, ~~about~~ ^{2 or} 3 pairs of Gilded
Flickers (nesting in old Cottonwoods), several
pairs of Gila Woodpeckers, a few hadder backs,
many Audubon's Towhees, and dozens of White
winged Doves. There was a fairly vociferous
Wied's Cuckoo Flycatcher here (which only Guy
saw) and Guy spotted a silent Red-Eyed
Vireo, which I saw fairly well. The black line
over the eye was very marked, and the
white belly was in good contrast to the greenish
wings and back. There were also a few
Empidonax flycatchers here, either Trail or Dusky
by the "whit" note, and a Peewee. We went back
to Bird to check for Myiarchus and Cowbirds, but
found only Br headed. Saw two hummers
vicely along here, both of which seemed to be
♀ Annas. Only a few lesser Nighthawks
much in contrast to the last time I was here.
It is good to see there are still Flickers here
as most of the S. gurneys have now been
removed from this area. Saw 8-10 Bufo alvarius
on the road from Yuma to Imperial Dam, where we spent the
night. (also saw a Barn Owl.)

June 6

Lower Colorado River, Imperial Co., Calif.
woke up shortly before dawn. A Western Kingbird
was singing loudly and c. 10 min later the
Vermillion Flycatcher started singing ~~and~~ kept
on until 15[±] min before sunrise. It sang only
from perches (a wire fence & the mesquite
trees) the most common song "pt pre-ee-eeen
pt pre-ee-eeen pt pre-ee-eeen", lasting $\frac{3}{10}$ seconds. It also
had a longer version "pt pt pre-ee-eeen pt pre-ee-eeen
pre-ee-eeen pre-ee-eeen", c. 2x as long as the 1st song.
Saw no aerial flight song. After song had ceased,
both birds of the pair began feeding, visiting the
nest in rapid succession, often after only 1 or 2 captures.
Foraging was restricted to low levels, and saw
them take food off the ground and pick a (moth)
of the bank once. Also at the spot here was 2 Flooded
Orioles, a pair of Gila Woodpeckers, and house sparrows.
We went to West Pond. ~~There~~ the Franklin's Gull
was still present, + 6-8 Redheads and 2 Faced
Grebes. A Great-tailed Grackle flew in from Arizona
and landed in a bush just opposite - Grey bloated
it, a worn ♀, prob. not breeding. Saw another ♂
Vermillion Flycatcher along the road, and heard
at least 2 Trail (Willow) Flycatchers singing. The
Vermillion was silent and was soon lost to sight. Lots
of Blue-Grosbeaks. We went to the spot above Laguna
Dam we visited last night and found a pair of
Wied's G. Flycatchers at the same spot. Think I saw

June 6

Lower Colorado River to Parker Section, Calif.
We went in a willow, but the birds were shy & couldn't be certain. There was a Trail Flycatcher singing here, + 3⁺ Yellow Warblers and 3⁺ Bell's Vireos. Saw most of the birds we found yesterday. Heard ♂ position note of Empidonax difficilis. Near ~~Bed~~ we saw another pair of Wied's A. Flycatchers in some tall Tamarisk Trees, and at the Ranch we visited yesterday Guy found a ♂ Bronzed Gros-bird which I saw fairly well (neck well erected). Saw 2 ♀ Costa-Bk-chin type hummers, and lots of Starlings in the trees. Not much else. Went from here to Blythe, arriving a little after 10 A.M. From here we went to Parker Dam stopping at some of the groups of trees c. 1/5 way there. Saw a Wied's A. Flycatcher at a boat landing - trailer camp; mostly House Sparrows + Gold Woodpeckers out. At a small in there was a Lucy Warbler and we found a pair of Vermilion Flycatchers and their nest. The nest was in a situation much like the other, in a denser tree and contained one egg. The ♂ gave the aerial display once while I watched. The call was a "pt pt pre-ee-en" repeated rapidly 6-8 times. The bird was high up in a cottonwood and rose 20⁺ feet up and went out 40-50 feet from the tree. The primaries were spread and flapped evenly and not rapidly constantly during the performance. The bird rose up and down (4-6' dip), not gliding, the tail somewhat spread while the


June 6

Colorado River, Parker Dam area, Calif.
bird was rising; ~~and~~ ^{the} performance was repeated 6 to 8 times.
No snaps heard or glides seen. The bird returned to the
top of the poplar and began praging. I lost it to sight for
a while, and when I found it again it was praging from
the low branches of some small trees, 6-7 ft from
the ground, and on a 2 foot fence post. It made
20-30 captures while I watched, about 1/4 shot sailing,
most slightly down, or at the level of the bird's perch
below the trees. The remainder were directed at
prey on the ground, the bird flying to the ground and
picking the food up, not apparently landing on the ground
- at any rate flapping constantly; the ground was a 1-2"
lawn with some bare ground nearby. After the first
song heard no vocalizations from the bird. While I
was watching the bird Gray came back and said he
had found 3 singing males, describing an aerial flight
song with this same call and a constant "tail fly fly fly".
I went here but was only able to find one ♂, which
displayed twice, in a fairly constant, heavy (40+ mph)
wind, facing into the wind. The call may have been
some what cliff. as I could not hear a double "pt" note
at the beginning of the call although this easily could have
been obscured by the wind. The bird was perched on
a telephone wire and took off as if foraging, then
the primaries were spread and flapped ~~was~~ slowly,
but evenly & constantly during the performance. The
crest and all the (red) body feathers were erected,

June 6

Colorado River, Parker Dam area; Calif.
and the tail was closed. The bird rose about
50-60 feet into the air, climbing constantly as it
~~gave~~ gave 5-8 calls, then dropped 1st to a tall cottonwood
and then to the wire from which it started. The
calls were repeated at $\frac{1}{2}$ [±] second intervals & the
calls are only slightly longer. The bird was in the air
only 8 to 10 seconds. From the perch it sprang
out from the wires, then went down to a small
plant in a field, where it foraged at low levels, flying
up 2-3 feet. It then rose slowly up into the air.
The primaries were spread with a slow, even
wingbeat. The crest & body feathers were erected,
and the tail appeared to be closed
the wings were flapped constantly,
and the wing beat was ~~deep~~ ^{high}, but
not deep



giving a "butterfly" appearance - normal
flight seems more like . The bird rose 20-30
feet, then dipped a little, and glided a little at
the end of its performance as it flew to a distant
telephone wire. It was too distant to hear. Heard
no other vocalization. The only display where I am
certain at all the sounds made were heard was
the first one I saw. Snapping does not seem to
be given by either displaying or perched birds. The
timing of successive "songs" in the display reminds
me of that of the Galapagos bird, the interval between

June 6

Colorado River, Parker Dam region, Calif.
being about as long as the song. The quality of the song is tinkling, and the notes are high pitched, like an Eastern Kingbird, whereas the quality of the Galapagos bird was that of one whispering loudly the song. ~~At~~ this area there was also a pair of Summer Tanagers and a single other ♂, and a Pewee. From here we went directly to Government Camp below Parker Dam, where we saw an Lucy Warbler and 4 Inca Doves, the latter feeding on a lawn and allowing close approach. We stopped at a spring, where there were many small black tad poles, to look for Cardinals; Saw 3 Pewees here and I saw a bird flying over which Guy said was a ♀ Cardinal. couldn't find it again. Hot and quite windy now. We stopped at 2 or 3 places along the river, but didn't find much except Doves (White-wing, Mourning), Vireos and Lucy Warblers. Between Fair and Vidal Jct., about 2 miles from Emp., a hawk flew across the road. It was small Buteo size, with short wings, rounded & a longish tail. It appeared uniform whitish below, very clean, with dark tips to the flight feathers. Above it was dark brownish grey, the tail appearing uniform and with pale ~~tips~~^{hoes} to the primaries. The wing beat was rapid for a buteo, slower than a Cooper Hawk; the light & dark colors sharply set off. It was too far off to see fine detail, but from what we saw it appeared to be an adult Crossbeak - don't know what

June 6.

Colorado River, Parker Dam region, Calif.
else it could have been (1st impression was Grey Hawk but
the tail is wrong). About a minute later we saw a
Pied-billed Falcon; the hawk was as big or bigger than the
falcon. Found a Mourning dove sitting on what
looked like an old Thrasher nest (the nest 2-3"
thick & quite deep - never seen such a good dove
nest before. ~~But~~ this is open desert, from which
the hawks ~~came~~, but in sight of the desert. We
went out from Vidal junct. via Hwy 95 to
Mecca & San Diego. Along 95 we stopped in the
Thick Scrub but found only Doves, Shrikes, Verdin
& Black-tailed Grackles. No reptiles on the
road and saw no mice until in Anza-Borrego
Park. Saw a Raccoon in the Laguna Vets.
Raining in San Diego. Skinned the quail,
as it was beginning to get high. The ovary
appeared to have sev. large follicles, and there
was an old blood patch. Can't see any signs of
molt anywhere. Iris, bill, and legs dark. The bird
appears to be an adult, post-feeding ♀. Birds
seen ~~along the~~ ^{during the} two days were:

Faced Grebe 2, Pied-billed Grebe 8-10, Double-
c. Cormorant, 25-30, Great Blue Heron (30⁺ sev. nest with
yg. along River). Green Heron - 1; Common Egret 30⁺; Snowy
Egret (10⁺), Night Heron - 2; White-faced Ibis 4,
Fulvous Tree Duck 2; Mallard - 25; Pintail, 3-4,
Cinnamon Teal - 8-10; Amer. Widgeon 2; Redhead 8-10;

June 6

Colorado River, Calif.,
~~Parker Dam~~

Crowsback 1; Scarp 1; Ruddy Duck - 10-15; Common
Merganser 1; Turkey Vulture 10-20; Red-tail Hawk - 1;
Goshawk - 1; Osprey ^{2 (1 twice)} ~~1~~; Prairie Falcon 1; Sparrow
Hawk ~~1~~ 20-30; Gambel's Quail 30⁺; Virginia Rail - 3;
Coot - 40-50⁺; Killdeer - 20-30; Avocet - 30-40; Stilt
40-50; King-bill Gull - 20⁺; Franklin's Gull, 1; Bonaparte's
Gull, Forster's Tern - 6⁺; Caspian Tern; 8-10; Black Tern
200⁺; White-winged Dove; 200⁺; Mourning Dove 100⁺;
Ground Dove 20⁺; Inca Dove, 4; Roadrunner; 4;
Barn Owl, 1; Burrowing Owl, 25⁺; Lesser Nighthawk
20-30; Hummingbird, sp. 4; Gilded Flicker - 4-6;
Gila Woodpecker - 30; Ladder back Woodpecker, 15;
Western Kingbird, 40 (1 nest, ? incubating); Ash-thr. Flycatcher;
30; Wied's A. Flycatcher, 6; Black Phoebe - 6;
Say's Phoebe, 2; Trail Flycatcher, 3⁺; Western Flycatcher
1⁺; Pewee, 6; Vermillion Flycatcher, 6; Tree, 10,
Roughwing 8-10, + cliff (100's) Scaallows; 2 Ravens;
50⁺ Verdins; Cactus Wren, 6-10; Marsh Wren, 10-20;
Rock Wren, 2; Mockingbird, 15⁺; Cassin Thrasher,
2⁺; Black-tailed Gnatcatcher - 6; Loggerhead Shrike, 20;
Bell's Vireo, 3; Red-eyed Vireo, 1; ~~Lucy~~ ^{Lucy} Warbler, 10⁺;
Yellow Warbler, 10-15; Yellowthroat, 20⁺; House Sparrow
100's; Starling, 150⁺; Meadowlark, 3-4; Yellow-headed
Blackbird - 200-300; Redwing - 200-300; [Tricolored - 8-10];
Hooded Oriole - 20-30; Bullock's Oriole - 10-20; Brown-
headed Cowbird, 100⁺; Bronzed Cowbird, 1; Summer
Tanager, 6; Blue-Grosbeak 20-30; House Finch 15-100;

June 6

Colorado River, Calif.

herbert Goldfinch, 4; Albert's Towhee; 20-30; Song Sparrow, 6; Great-tailed Grackle, 1; 91 sp.

June 7-9

San Diego, Calif.

intermittent rain today, didn't go out.

June 10.

We left San Diego about 4 P.M. June 9 and went to Doheny State Park where we talked to Eleanor Pugh for a while. Looked over the reports for S. Calif. Aud. Field Notes and then looked for birds around the park - not much here. We went from here to San Bernardino & up U.S. 395 to Big Pine and then out towards the White Mts. to Box Elder Spring, where we spent the night. Cold and windy. In the A.M. we saw a few House-Finches, a Gnatcatcher, ~~an~~ Empidonax, and a hummer, but nothing else. We went up over Westgard Pass, seeing about 5 Chukars on the road. We stopped at two places in the piñon-juniper near Westgard, but didn't find much - a few Gnatcatchers, Black-sh. Gray Warblers, and some Gray Flycatchers. Saw 2 Pinyon Jays where we turned off into the higher Whites. A few sparrows about. We went up to Schuman Grove, 10000[±] ft. in the Bristlecone pines where we looked around for some time. Birds were not very numerous here, and decidedly non vocal. Nutcrackers were fairly conspicuous in this country, and there were lots of Pygmy Nuthatches at the grove. Saw a Gray-bellied Junco

A. B. Bred:lis
1964

(12)

10 June

Wyman Creek, White Mts. Inyo Co., Calif.
collecting nest material, + 3 scattered Oregon.
Nothing especially interesting here except the
lack of birds. Found a couple of Vesper
Spawns with Brewers and Green-tailed Towhees
in the high ~~chaparral~~ ^{oxygen}. We went from Schuman
Grave to Wyman Creek and Guy decided to
drive down to Deep Springs. Near the top
birds were few, silent, and hard to find.
Saw few warblers, mostly Audubon (^(P. nigrescens) + B. T. C.)
and only 2 or 3 pairs of Oregon Juncos.
The mountain mahogany at 9000[±] ft had
almost no birds, Chipping Spar. the commonest
species, and it was not until we got
down to the willows near the first Ranch
at 7200[±] ft. that we were able to find many
birds. There was much water along the willow,
from a spring-creek dammed by beaver. The
willows were still beginning to leaf, but were
full of birds. ^{Warbling Vireo} MacGillivray Warblers, Gray
Flycatchers, Song and Fox Sparrows being the
commonest species. There was a little mixed
Mt. Mahogany Junco on the hillside here
where we saw sev. Bendavia nigrescens,
Nutcrackers, and here we heard a Broad
tail hummer. Along the creek I saw a ♂
Calliope very briefly. It seemed somewhat surpri-
sing to find Robins in numbers all along the

10 June

Wynnan Creek, White Mts., Fresno Co., Calif.
Creek. We worked along this first area for
some time, then moved gradually down the
canyon. I saw 2 more Calliope hummers
and we saw and heard 1 or 2 more Broad-tails.
No more juncos. The Empidonax here all
except 3 or 4 seemed to be Gray Flycatchers,
giving a sharp "wheat" or "whit" call note,
plus a loud "dee hic" call and the usual
"chee weet" song, ~~the~~ ^{some} of the syllables being
sharper than birds I have heard at Boca. The
absence of Trail Flycatchers is most surprising
but the willows give directly to sage, not pines,
and therefore is like Boca (instead of the grassy
meadows where I usually find trail).
As we worked further down the brush-covered
gave way to pines and junipers (at 6500+
feet). Nutcrackers remained common in this
habitat, and we began to hear Steller Jays
(1 Scrub Jay also). Broad-tail Hummers
were very common here - saw 3 or 4 at once
and heard them everywhere we stopped.
At one point we stopped and I heard an
odd chip note, like a Nashville W., and in the
willows found a Virginia's Warbler, the first
we have found in the White in three years looking.
MacGillivray Warblers were still the commonest
Warblers, but we began to find a few Wilson

DeBenedictis
1964

(14)

10 June

Wynman Creek, White Mts., Inyo Co., Calif.
and Orange-Crowns with them. Yellows scattered
all along through the willows. Heard two Solitary
Vireos singing in the juniper above the creek,
but they were way up a cliff & I was too tired
to chase them (both may have been isolated
birds) - still wonder if it breeds in the Whites,
albeit rarely. As we got still lower along the
creek we began to run into flocks of Western
Tanagers, mostly flycatching from the willows,
and undoubtedly late migrants. The Gray
Flycatcher gave way to Dusky for no apparent
reason at at the lower parts of the creek
no Grogs were found at all. Also Grosbeaks
^{Red-sided Towhees} ~~and~~ Bullock Orioles appeared along here.
The road left the creek going into sagebrush
country (saw a Desert Sparrow here) then back
down to the creek. Lots of Tanagers here &
a few Lazuli Buntings. Shortly below here
the willows disappear and we entered the
Deep Springs valley. Birds seen along this route
in addition to those already mentioned were:
Red-tail & Sparrow Hawk, Vulture, Killdeer, Mourning
Dove, White-thr. Swift; Flicker, Sapsucker (sp - drumming);
Ash-thr. Flycatcher; Pewee; Olive-sided Flycatcher;
Violet green & tree Swallows; Ravens; Mt. Chickadees,
Bush-tits, Bewick, House, Rock, and Canyon Wrens,
Mt. Bluebird; Ruby-cr. Kinglet, Cedar Waxwing;

x Bred:lis
1964

15

10 June

Deep Springs, Inyo Co., Calif.

Br. Blackbird, Cowbird; Cassin Finch; Pine Siskin;
Mt. Quail. We arrived at Deep Springs School
about 3 P.M.; the first thing to strike my mind
~~was~~ how few kingbirds were about - the second
was how many pewees - The kingbirds were
found to ~~be~~ sitting on the ground out in the
mowed Alfalfa fields, and although not as common
as July, 1962 - still they were not uncommon.
Heard at least 1 pair of Cassin's near the school.
It was obvious there was a big flycatcher migration.
There were 2 or 3 Pewees in every tree, robins were
scattered along the fences and out in the
alfalfa fields, picked on the ground - at least
a hundred, perhaps 200, birds here. with them
were 20-30 Empidonax flycatchers (1 or 2 of which
~~were~~ yellow enough for westerns, (+ call notes), ^{agately}
sang a Trist: "fity bew"); also here were about
10 ~~olive-sided~~ Flycatchers, which were silent.
The Pewees were quite noisy. First inspection
revealed only a few (breeding) Yellow Warblers, 4-6
Wilson Warblers, and one Oporornis (tolmiei).
~~Western~~ Tanagers were also ~~fairly~~ ^{fairly} numerous but
little else was about at first inspection.
However, as we walked ~~about~~ ^{around} the central
alfalfa field, a flock of sparrows and Blackbirds
flushed leaving a lone bird which I glanced
at. Much to my surprise the expected House

De Benedictis
1967

16

10 June



Deep Springs, Inyo Co. Calif.

Sparrow proved to be a well marked ♀ Dickcissel. The strongly streaked back, red-brown wings + light carpels, were conspicuous; the head was blue grey, ~~with~~ pale superciliary and a light spot below the eye; a dark malar stripe. The bird was unmarked white below except for a ~~very~~ ^{warm} yellow suffusion on the breast. It didn't call. We watched it as it foraged for several minutes in the freshly mowed alfalfa. At this point we met Richard Strong who manages the ranch. He told us that Oliver Allen had been here this A.M. & had seen an "Eastern Kingbird" and a ? - couldn't remember. He also said he had picked up a bright blue bird about a week ago which Oliver said was a Blue Grosbeak. - he had then thrown the bird down again. We asked where it was and Strong took up about 20 feet away - picked up the bird, a beautiful ♂ Indigo Bunting. ^{Strong} ~~He~~ said he had found it on the previous Sunday. At this point we saw an Oporornis fly into a tree from the alfalfa, and taking the Bunting (for Dick Banks) went to look for it. Never did find it, but I looked into a tree at a house sparrow, to find the bird next to it a Warbler with a diffuse yellow rump patch. It was preening its flanks and the tail was spread

DeBenedictis
1964

(17)

10 June

Deep Springs to Oasis, Mono Co., Calif.
showing the clear white tail band  of a
Magnolia Warbler. We eventually got to
within 10 feet of the bird, in ♀ plumage,
and could see this definitely, but not clearly
streaked yellow breast (almost grey across the chest),
yellow throat; the annulars were grey like the
head, and ~~the~~ white mark above them was
very clear; ; the wings had a broad white
single bar like a Fairburn's, the back was grey, &
the lower belly & under tail coverts were white.
However, when we first found it, my husband had trouble
locating it, and ^{first} yelled "There it goes out of the
tree!" No! That's a Redstart!" I was able
to see this bird also, a bird in bright ♀ plumage
and showing typical redstart actions of wing
and tail fanning. We didn't watch the redstart much
but had fine, long views of the Magnolia W. We heard
from Strong's wife that the other bird Oliver had seen
was a Catbird, but were not sure he had really
done so. At this point we decided to go to
Oasis, on the East side of the Whites. This
is another ranch located out in the open
sage country; This area here is 2-3 times
as large as Deep Springs, and there are
many more trees and much less under-
growth here. However a pond and several
irrigation ditches gave a greater supply of water

1964

10 June

Oasis, Mono Co., Calif.

Flycatchers were conspicuous here as at Deep Springs, being present in about the same proportions. The only Empidonax identified were Westerns, giving the "pueet" and "cheep" notes. Western Kingbirds were fairly common here, and I heard one Cassin's calling. Oreolus, Groblers, and Yellow Warblers were less common (breeding) birds of this area, along with House finches & House sparrows. However, there were a few (? Juncos) here also; the first warbler I looked at proved to be a Redstart in the same plumage as the one we saw at Deep Springs - it was working high in a cottonwood. In the only suitable habitat for buntings We flushed 3 birds, two of which landed in clear view directly before me. One was a ♀ Lazuli, the other was rich brown on the back, with chestnut borders to the feathers, and no wing bars (just the borders as mentioned.). Below it became pale tan, even on the breast, and the sides of the breast were clearly though lightly streaked. The breast pattern, ~~lack~~ of wing bars, and bright back color are indicative of ~~the~~ a ♀ Indigo Bunting. However, I felt better about having seen the species when we were able to find the third bunting, a well marked ♂, with no orange on the breast and no wing bars (wing feathers edged with brown).

1964

10 June

Oasis to Deep Springs, Inyo Co., Calif.

we had fairly good looks at both birds, then went on about 25 yards, when they began yelling about a Catbird which he could (but I couldn't, then) see. However, I eventually figured out where it was, and we had fine views of it as it foraged on the ground along on the ground. It was all grey except for deep chestnut undertail coverts and a black cap. The bill ~~appeared~~ even thinner proportionally than that of a mockingbird, and the bird was most unlike anything I had ever seen before. We were unable to find anything else odd here. There were a couple of Wilson Warblers and a few Tanager here along with the /lyat. chens. We then went back to Deep Springs where we spent the rest of the evening. We couldn't find any of the vagrants we had located earlier, but we went to the area where Oliver was supposed to have seen a Catbird and here I heard a mimic song. I peered into the tree whence the song came and spotted a second Catbird sitting quietly on a branch, doing its best to stay out of sight. The chestnut undertail coverts, short thin bill, and black cap were clearly seen on this bird as well. We didn't see much else here except a Long-eared Owl (also one at Oasis); these Owls are much paler, especially on the facial disk, than the other birds

1964

10 June

Deep Springs - Inyo Co., Calif.

of this species I have seen west of the Sierras. We went to ~~Big Pine~~ ^{Big Pine} for dinner, then returned to Deep Springs where we spent the night.

11 June

It was cold and windy during the night, but clear. It became quite evident that birds had moved during the night, as there were only $\frac{1}{4}$ - $\frac{1}{2}$ as many flycatchers about compared to yesterday. Wilson Warblers were gone, and there were 6-8 Western Flycatchers about now. Heard one træli song (tits-baw). Only 1 or 2 Olive-sideds. Along the e side of the same area we found three pairs of Cassin Kingbirds. The birds were in pairs and rather evenly spaced along this area. The birds were very concerned with each other's presence, and wing fluttering + tail fanning were frequently seen. They seemed to be exclaiming members of adj. pairs and also Western Kingbirds. All were quite vocal, giving loud, deep "kip" notes and the characteristic "chi burr" call. Guy saw one putting sticks on what is a good kingbird nest site, the broken end of a large branch high in a cottonwood, but the birds seemed disturbed by ~~my~~ ^{our} presence and would not perform for me. One of the pairs is in the same area they have been the last two years, the others were in areas that were occupied by Westerns. Along here I heard a vinting singing and Guy squeaked in a full male Indigo Bunting. This bird had blackish wings and the

A. Benedict's
1964

(2)

11 June

Deep Springs, Inyo Co., + Oasis, Mono, Co., Calif.
feathers of the breast showed much blackish coloring.
It sang for a while then disappeared. I saw no
other Buntwigs here. There were two or three Mac-
Gillivray Warblers in the low trees here, a few W.
Tanagers, and Guy discovered a male Black and
white Warbler working in the trees when the
Catbird was. The Warbler had a black throat, & the
distinct black & white streaking was clearly noticeable.
It was singing a quiet rambling, "wee see wee say way see"
song audible only at close range, and did not
especially restrict its action to creeping as the species
usually does. We did not find much else here
unusual except for a Nutcracker and 3 young
Long-eared Owls. We went to Oasis ranch,
where similar changes in the avian fauna were
apparent. Flycatchers were scarce, although there were
proportionally more Westons. No migrant Warblers,
but a few tanagers still about. Saw one Long-eared Owl.
Found all three Buntwigs where we saw them
yesterday, plus at least 2 Cassin's Kingbirds.
These were in a tree with 2 other kingbirds,
which looked the same; only two called. The four
birds together could mean either non-breeding or
that this was a boundary between territories. Elsewhere
kingbirds were also Western by tail pattern and calls.
Not much else of note here. We went back, stopping
at Deep Springs briefly. I found the B & W warbler

Benedict's
1964

(22)

11 June

Deep Springs to Yosemite Natl. Park, Calif.
again and heard it singing quite wildly. Thought I saw the Dickcissel again, but couldn't get a good look at it. We went from here to Big Pine, seeing a chuckar on the road, and from Big Pine on north to Crowley Lake to look for Sage Grouse along the W. side of the lake. We were unsuccessful in this, but found a few Sage Thrushes and a Vesper sparrow ~~nest~~ with three eggs. It was cloudy here, and overcast. We went from here to the ~~SW~~ ^{SW} end of Mono Lake and up over Tioga Pass into Yosemite Park. Traffic was slow going ~~over~~ ^{through} the gate so I got out and walked around in the nearly ~~free~~ ^{snow-} free meadow here, finding only Zonotrichia, a Pine Grosbeak, 2 Mt. Bluebirds, 4-5 Mt Chickadees, and a couple of Nutcrackers. We went from here down to Crane Flats. Birds were not very noisy, and there was not much unusual about. Found a Oregon Junco nest with 3 2-3 day old young; a pair of Pileated Woodpeckers here and a single Antic 3-toed Woodpecker were found along the meadow edge. The meadow is completely snow-free now, and the grass is really coming up. Caught a Thomomys elegans but didn't keep it. We then went down to Yosemite Valley to look for Black swif and were able to find 6-8 flying through the spray in Bridalveil Falls. Hundreds of white-throats

11 June

Yosemite Natl. Park, Calif.

and 50⁺ Violet Green Swallows also here. Saw a ♂
Calliope Hummer at Rocky point. We ate in the
valley, then went up to Peregoy Meadow to look
for Great Gray Owl, which only Gary saw. There
is fresh snow in the forest but none in the meadow.
Vegetation has advanced considerably from two
weeks ago. Found a ♀ Williamson sapsucker in
a nest hole, and Harry's feeding young. Saw
2 Rana muscosa but no sign of Bufo. After it
got dark we went to Hennessey ^{Ridge} Tree Lookout, to
find some owls. We heard 2 Sawwhets (again)
2 Flammulated, and a Spotted but saw none.
lots of bats out. Had something jumping around
in a tree, chattering but couldn't even eyeshine
it. Spent the night here. ~~The~~

12 June

The next A.M. got up well after sunrise,
and birds were going full blast. We didn't stay
here very long, but went to Peregoy to see if the
Owl was out. Stopped at Badger Ski Area to
check the 3-toe nest I found in May, but they
have apparently abandoned. No Bufo tillling.
At Peregoy we had good looks at a ♂
Antic 3-toed Woodpecker and heard another.
Owl not cooperative. More Ruby-cr. Kinglets
singing now than in late May. Heard Mt.
Quail here for the 1st time in 6 visits.
No Wilson Warblers this year but lots of

123me

Yosemite Nat. Park to Berkeley, Calif.
Cowbirds out in the meadow. Then went
to Glacier Pt for Breakfast, and out to look
for Blue Grouse on the ~~road~~ ^{trail} to the valley
floor. Didn't hear any, but a male was
feeding along the trail and we got quite
close to him. Only one Solitaire here, where
last year there were half a dozen or more.
Not much else about. Went back & stopped by
Puegoy again. In the woods along the edge I glanced
a woodpecker ridged tree and noticed a hole with
an odd center. I approached to discover a small
owl peering out at me, an eventually the Pygmy
Owl came out and flew off. From Puegoy
we went back to Crane Flats, where we saw the
pair of Pileated Woodpeckers but little else
of note. We then went up to White Wolf to look
for Pine Grosbeaks but were unable to find any.
Lots of Cassin Finches and most of the small
Insectivorous birds appear to be in, but were not
very vocal. We stopped again at Tuolumne Meadows.
but didn't see much here. Again the area is
almost entirely free of snow. We went on over
Tioga Pass and stopped a while near Mono
Lake, then went on to Tahoe. Raining at Tahoe.
Spent the night here, then caught a bus home
in the A.M.

June 28

Berkeley to Deep Springs, Inyo Co., Calif.
went to Newport Bay with Richard Stallcup, Janet Kroesen, & Art Wang to see the Tropicbird there. The trip down was long and non eventful; arrived c. 2 P.M. The gliders the bird comes to were up, and although we waited until 5, the bird failed to show - it had been seen the 23 and 25th. ~~Copy~~ ^{the} photos show it clearly to be a white-tailed Tropicbird. We went to Wes Metnick's house, where we had dinner - saw a Hooded Oriole's nest and a Mocker's nest with 3 eggs, 1 young, and ~~then~~ ^{yes} gave me negative to his best photo for the museum. Went up via 395. Saw a D.O.R. propeller and caught a small Chionactis at the junction 395 and Rd, north of

June 29

Went to Deep Springs where we spent the night. Got up after light but almost no song. Birded here from c. 6:30 to 9, then went to oasis, where we spent c. 1/2 an hour. At Deep Springs we saw little out of the ordinary, almost no migrants:

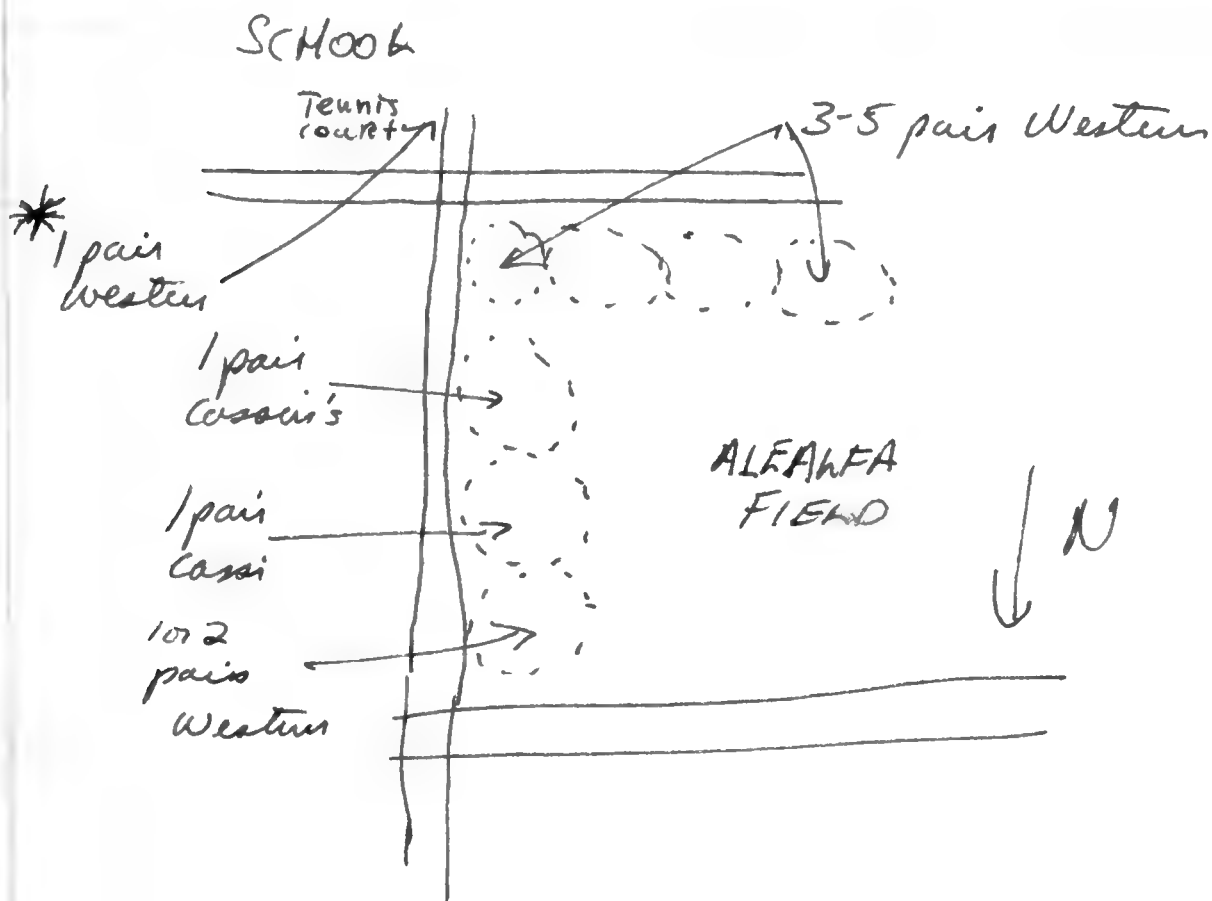
10 Sparrow Hawks (1 family group w. 5 young), 4 Turkey Vultures, 4 Killdeer, 2 Long Eared Owls, 15-20 Western Kingbirds (1 nest), 4 Cassin's Kingbirds (2 nests - see below), 1 Ash-Thr. Flycatcher, 10 Horned Larks, 4 Tree Swallows; 10 Ravens, 3 Black-billed Magpies, 3 Robins, 1 Orange-cr. Warbler, 10 Meadowlarks, 25 Redwing Blackbirds, 50-75 Brewer Blackbirds; 20 Cowbirds, 10 Starlings, 10 Bullock's Orioles; 1 Indigo bunting - ♂ in transition plumage - it was the dark bright brown color of the ♀,

P. DeBenedictis
1964

June 24

Deep Springs, Inyo Co., Calif.

and mottled blue on the top of the head, the back, breast, belly, and tail, the wing coverts blue with brown edges. Silent. - 30 House Finch, 125 House Sparrows. The King birds were spaced as:



They were in the trees along the road and pruned out over the alfalfa fields, which had just been mowed. The North pair seemed to be just finishing the nest, and were seen June 10-11. The other pair looked like they were feeding young, but this was hard to tell; this was the next guy saw being built on June 11. (He saw a bird incubating on June 14.) The pair of Westerns at the tennis court (*) has apparently replaced one of the pairs of Cassin's which were there on June 10-11. I never saw an odd bird with the Cassins but of the 3-4 Westerns were together. At Oasis we went to the spot where the beatings were but they had

P. DeBenedictis
1964

June 29

Deeps Springs to Berkeley, Calif.

moveed on, no buntings at all now. There were lots of Western Kingbirds but I saw only 1 Cassin's. It was up in a tree trying to pull a piece of pile stung pee (for nest material) but couldn't do it. Didn't see a nest. Caught a large Pituophis in a side canyon near here, then went to Yosemite. Saw a Cooper Hawk 30-40 mi. S of here. Vining, not much else on the way. We stopped at Saddlebag Lake just W of Tioga Pass where we saw 3 Calif Gulls and 2 Gray-crowned Rosy Finches. They were eating insects and ~~what~~ ^{what} appeared to be the roots to last year's grass from the mud at the edge of a small snow pack. Also 2 Yosemite Toads here. Went to Crane Flats but not much out here. Quite a bit of song. No Solitary Vireos this time, and saw White-headed Woodpeckers. Saw two Red-breasted Sapsucker nests, both c. 25-30 feet up in live Red Firs, and could hear young begging. Didn't find the Pileated Woodpecker this time, no owls. About 5:30 went to ^{Hemlock Fir Ridge} ~~Crane Flats~~, seeing a D.O.R. Masticophis lateralis c. 5000' on the road down from the flat. At the ridge Fox Sparrows, Nashville Warblers and Rufous-sided Towhees were fairly noisy when we arrived, and gradually quiet. Not until it got dark did Mt. Quail sound off. No Owls in the evening except one very distant Saw-whet. Left about 11 & got home c. 2 A.M.

Baerdtis, P.
1964

July 12

Bay Bridge Toll Plaza, ~~Berkeley~~ ^{Oakland} Alameda Co., Calif.

went out c. 3 PM to a S.G. Hwy (3:50)
to see what was in. Peep first seen last weekend.
Stopped at the crescent and at the gun club,
and scanned the salicornia with a spotting scope.
Windy so that most birds sat in protected spots.
Saw:

600[±] 50 Western Sandpipers - 350[±] 50 at
crescent, remainder at Gun Club. All
appeared to be in breeding plumage.

11 Dowitchers - all breeding plumage
+ sound like short-bills. "tu tu":

25 Willets

6 long bill Curlew

1 Black-bellied Plover - non-breeding
plumage

10 Killdeer

150[±] (134[±] at gun club) Forsters Terns,
10-20 imm with brown backs,
rest 80% non breeding plumage
or advanced juvenile plumage

15 Caspian Terns - 1 or 2 young

150 Gulls - c. 20 Calif or 10- Ring-
bills; ^{rest} about evenly divided as
to age class, ~~rest~~ ^{were} Westerns

land birds: House Finch, Song Sparrow, Mourning
Dove, and Loggerhead Shrike. Spent only c. 1½
hours here.

P. DeBenedictis
1969

Aug. 8.

Sacramento Valley near Davis, Yolo Co., Calif.
left Berkeley c. 4:30 A.M. and went with Art Wang
and Marie Maus out O.S. 40 to St. Rt. 113, then to
Woodlands, + east on ^{St. Rt.} 16 to Elkhorn Ferry, and out
c. 1.8 miles to a spot where some Valley Oaks adjoin the
river vegetation and spent about 2 hrs looking at land birds.
There were a number of migrants here, in groups of
~~8-10~~ ³⁻⁶ birds which stayed together fairly well. None sang,
but most gave an assortment of call notes, including
a sharp "tip", a buzz (short, brulung-like), and a very
species specific call. One Western Flycatcher gave ♂
position note + the sharp "cheep" note was frequently heard.
The Yellow-billed Cuckoo was seen very well as it flew from
the river vegetation into the adjoining obnoxious the road
to Elkhorn Ferry; I heard no Cuckoo sound but Marie
was chasing its calls shortly before I saw it. Only ~~before~~ ^{before}
sided Towhees sang, and many juveniles were seen. The
Two ? Zonotrichia flew into a tree landed briefly, then
were lost. Forked tails, faintly streaked below, dull bill.
largeish sparrow, wing bars seen but not crown or back, looked
like perhaps yg. White-crowns. Bullock's Orioles both imm.,
but several ♂ Lazuli Buntings were seen. From here about
8:15 we went back to 16 towards Sacramento c. 2 miles
+ stopped at two pullouts on the E side of the road, and
looked for land birds here. Migrants were not as
numerous, and in larger groups. Lazuli Bunting and
White-breasted Nuthatch sang. One of the Western Flycatchers
looked very large but not differently colored. Art shot a

DeBenedictis
1969

Aug. 8

Sacramento Valley near Davis, Yolo Co., Calif.
Wilson's Warbler in Fresh Plumage. Bird listed in the 2nd column.
From here we went on the standard waterbird circuit, back
on Rt. 16 towards Woodlands. 2¹/₂ mi from Elkhorn Ferry stopped
a Yolo Bypass where there is water and saw numerous
waterbirds. 3 half-²/₃ grown Avocets here. About 1/2-3/4 of
all species were still in breeding plumage, except Phalaropes,
Spotted Sandpipers. We then went 2 mi. to Road 102 to N
1 mi to Speckles Sugar Ponds. Very little water and almost
no birds were there, then S on 102 c. 6-8 mi to Davis
Sewer Ponds (1 1/2 mi. W Davis) lots of Tree and Cliff
Swallows here, but very few Shore birds (2 B. B Plover
in nupt. plumage). Very poor. Went to Davis, then back
out 102, 2 mi. from city limits to Yolo Bypass on Rd. 28,
and out along the Yolo Bypass. Here water either to
Shallows or to deep, and virtually no birds of any
sort seen. Birds seen after the land birds, on 3rd
column. We left here & arrived Berkeley c. 4:15 and
went to the Toll Plaza where we looked around rather
casually for a while. Peep not very conspicuous, but
lots of Forster's Terns. Tide was about + 4.0 and
most of the birds were out on the mud & ∴ hard to
count. Found an Old Killdeer's Nest. The Western
Flycatcher was in Baccharis near the game club, the
first I have ever seen here. Fairly good day!

DeBenedictis
1964

Birds seen

Sacramento Valley near Davis, Yolo Co., Calif

Aug 8

Mallard	0	0	3	1
Pintail	0	0	2	0
Cinnamon Teal	0	0	8	0
Shoveler	0	0	4	0
Canvasback	0	0	4	0
Lesser Scaup	0	0	6	30
Ruddy Duck	0	0	12	1
Vulture	2	1	10	0
Red-tail Hawk	1	0	2	0
Sparrow Hawk	2	3	5	3
Quail	4	15	0	0
Pheasant	10	10	10	1
Coot	0	0	25	2
Grackle	0	0	3	0
Semipal Plover	0	0	1	20
Snowy Plover	0	0	0	1
Killdeer	2	0	75	35
Black-bellied Plover	0	0	2	50
Black Turnstone	0	0	0	6
L. Billed Auklet	0	0	0	50
Whimbrel	0	0	0	2
Spotted Sandpiper	0	0	2	0
Willet	0	0	2	200
Greater Yellowlegs	0	0	3	0
Least Sandpiper	0	0	250	0
Long-bill Dowitcher (id. by call.)	0	0	125	0
Short-bill Dowitcher (" " ")	0	0	0	200
West. Sandpiper	0	0	5	800
Godwit, Marbled	0	0	0	25
Avocet	0	0	100	100
Stilt	0	0	40	0
Wilson Phalarope	0	0	5	0
Nontus	0	0	125	0
West. Gull	0	0	0	100
Calif Gull	0	0	2	100
R. B. Gull	0	0	0	25
Bonaparte gull	0	0	0	1 ad.
Forsyth Tern	0	0	0	250
Caspian Tern	0	0	0	75
Mourning Dove	25	35	25	5
Cuckoo, Yellow-billed	1	0	0	0
Barn Owl	0	1	0	0
Horned Owl	1	0	0	0
Burrowing Owl	0	0	2	0
Kingbird	0	0	1	0
Flicker	10	10	5	0
Acorn Woodpecker	25	15	0	0
Downy Woodpecker	10	15	0	0
nutall's Woodpecker	8	3	0	0
Ash-Thr. Flycatcher	15	8	2	0
Black Phoebe	0	1	0	0
Western Kingbird	6	2	8	0
Western Flycatcher	4-8	3-4	0	1
Tree Swallow	25	15	200	0

DeBenedictis
1964

Birds seen

Sacramento Valley near Davis, Yolo Co., Calif.

Aug 8

Barn Swallow	10	2	5	2
Chiff Swallow	50	50	150	0
Scrub Jay	15	10	2	0
Maggie, Y. Billed	3	10	4	0
Titmouse	12	10	2	0
Bush Tit	30	25	15	0
White-br. Nuthatch	0	3	0	0
Wren-tit	0	1	0	0
House Wren	35	25	3	0
Beardick's Wren	10	10	4	0
Robin	4	8	0	0
Shrike	0	0	4	0
Song Sparrow Starling	5	25	0	0
Solitary Vireo	1	0	0	0
Warbling Vireo	3+	4+	0	0
Warbler, Orange-cr.	15-20	10+	1+	0
Nashville	3	5	0	0
Yellow	1	2	0	0
Mac Gillivray's	2	2	0	0
Wilson's	20+	10	0	0
Yellow-throat	0	0	1	0
House Sparrow	20	35	10	10
Meadowlark, Western	2	0	10	2
Blackbird Red Wing	0	0	200	0
Brewer Blackbird	0	0	50	0
Cowbird	0	0	10	0
Bullock's Oriole	2	0	0	0
Tanager, Western	3+	3	1	0
Grassquit, Black-headed	3	10	0	0
Blue	0	0	1	0
Lazuli Bunting	5	3	0	0
House Finch	50	75	125	10
Am. Goldfinch	5	15	0	0
Rufous-sided Towhee	25	25	5	0
Brown Towhee	5	3	0	0
Chipping Sparrow	1	0	0	0
Zonotrichia	2	0	0	0
Song Sparrow	3	4	5	5

total: Species

92

48

42

54

30

Individuals

500+

500+

P. DeBenedictis
1964

Aug. 16

Bay Bridge Toll Plaza, Oakland, Calif.

went down c. 4 P.M. for a 6 P.M. high tide didn't give as complete a check as usual, as we were chased out of the crescent area. Water too high at the gun club to find many shorebirds. Saw:

2 Brown Pelicans

10 Semipalmated Plover

10 Killdeer

15 Black-bellied Plover

5 Black Turnstones

15 Long-billed Curlew

25 Willets

25 Short Bill Dowitcher (by call)

900 Western Sandpiper

25 Marbled Godwits

25 Avocets

55 West. Gulls

25 Calif. Gull

10 R. B. Gulls

125 Forster's Terns

18⁺ Elegant Terns

15 Caspian Terns

1 Black Tern.

A few of the ~~Sander~~ ^{Plover} were in breeding plumage, as were a few terns, but everything else was in winter plumage.

P. DeBenedictis
1964

21 Aug

Bay Bridge Toll Plaza, Oakland, Alameda Co., Calif.
went down c. 2 P.M. (high tide (4.8) at 2:30 PDT)
and parked near the Emeryville fill and walked into
the shell mound along the Saticumia marsh. Every-
thing was at the shell mound because there were quite a
few people on the flats; tide too high for birds to be feed-
ing. Nothing seen in the marsh except 2 Song Sparrows.
~~Most~~ of the larger shore birds were loafing here. From
here went back and drove to the Bay Bridge Rod & Gun
Club area where spent until c. 7:30 looking at bird
comming in on the ~~out~~ ^{out}-going tide: lots of Terns here.
The "peep" ~~at~~ ^{mostly} remained on the sand bar where they
loaf until after I left, but were getting restless and
a few small group & some larger birds appeared on the
mound to feed (reverse the order usually seen at
Bay Farm Island - 1st peep then larger birds). Terns
began to feed a lot as tide went out. Most (90%) of the
birds were in winter plumage, though traces of summer
pl. could be seen on many. Birds seen were:

1 Snowy Egret - imm.

3 Lesser Scaup - eclipse ♂s

1 Ruddy Duck - ♂

1 Sparrow Hawk - ♀

2 Coots

10 Semipalmate Plover - most in breeding plumage

2 Snowy plover - on sand spit, winter plumage.

125 Black-bellied Plover - no perfect plumaged birds,
many in moult though, but with much

P. De Benedicis
1964

21 Aug Bay Bridge Toll Plaza, Oakland, Alameda Co., Calif.
black below.

1 Ruddy Turnstone - molting

6 Black Turnstone

30 long-bill Curlew

6 Whimbrel

400+ Wilets

203 Greater Yellowlegs (2 together, 1 alone)

1 Knot - molting but still good ^{summer} plumage.

2 Baird's Sandpiper - with Westerns,
much larger, more bulky. no wing
strip 2, "creet" note. very bright bird.
At end of shell mound, and did not
associate with other peep as is typical
of this species.

10+ Least Sandpiper.

175+ Short-billed Dowitcher - most (75%)
in winter plumage. all idled by call.

1600+ Western Sandpiper - about a dozen
still with fair breeding plumage of 250
seen at close range, rest in winter plumage.

100 Marbled Godwit

300 Avocets

100 West, Calif, + R. B Gulls (that order of
abundance).

150-175 Forster's Terns - still 3 dozen gold adults.

6+ Elegant Terns

10-12 Caspian Terns.

DeBenedictis
1964

Aug. 30

Monterey Bay, off Pacific Grove, Monterey Co., Calif.
boarded a chartered fishing boat, the 'Gray Ghost' at Sam's
wauf in Monterey about 8:30 and left c 9:15 for a pelagic
bird trip sponsored by Golden Gate Audubon Society. We
went out WNW about 25 miles, then south and back
in ENE about 2 miles off the Pacific Grove water
front. It was overcast, and became quite windy after
c 10, a little wind all day. Rain squalls, light far
out but not enough to hinder the birds. Most pelagics
were beyond c. 7 miles out. Birds seen were:

Black-footed Albatross - 3 - each alone and 2
were on the water, the third came up to
the boat, all on the south bound leg of the route,
c. half an hour apart.

Fulmar - 1 - a very mottled bird in a strange
plumage seen about 20 mi. out on the way out.
an intermediate phase with the back pale tan, head +
the wings dark, uniform - bill short, heavy, yellow.

Pinkfooted Shearwater - the first one appeared
c. 8 miles out and we saw them c. every
5 ± minutes on the average until we were
about 5 mi out of Pt. Pinos on the way back.
all birds were alone, never more than 3 in
sight at once.

New Zealand Shearwater ⁻⁴⁻ 2 seen on the way out,
c. 10 + 18 mi out, one on the South leg,
and one c. 10 mile off Pt. Pinos on the
way in.

Aug 30

Monterey Bay off Monterey, Calif. (boat trip)

^{65,000+}
Sooty Shearwater - encountered about 7 mil out,
but the majority were seen 8-15⁺ miles out,
thus they gradually diminished in #s until
they were only ^{2-5/minutes} ~~2-3~~ ~~birds~~ ~~as common as p~~, at
about 1/2 the south bound leg. We again
picked up #s c. 1 1/2 miles off Pt. Pinos, and
saw them at 20-100 birds/minutes until about
7 miles from the pier. On the way out,
birds were first seen streaming by at 2-500/
minute until c. 8-8 1/2 miles, then for the
next hour or so we encountered groups of
2-500 on the water with flocks of 1000-5000
almost constantly in ~~the~~ sight. The birds on
the water were mostly resting, but a few were
seen to dive - mostly solitary birds. Flocks
seemed not to move with much organization
except that the general pattern of movement
was north along the bay. No birds were seen
diving. Although a "Sooty" zone was clearly
defined on the ~~west~~ ^{east} side, it gradually
disappeared on the west side. Birds did
not generally allow approach to within c. 200
feet, and took off into the wind, then
circled back with the wind when approached.
By far the commonest species; estimate:
6000 + 36000 + ¹⁸⁰⁰⁰ ~~2100~~ out, ³⁰⁰⁰ ~~1100~~ in.

Aug. 30

Monteary Bay off Monteary, Calif (boat trip)

Petrel, Ashy - 75+ - commonest we have seen there here.

all were beyond the main scaly zone, 20-25 mi out. We saw a group of 15-18 on the water which flushed as we approached, a flock of 12-15 in flight and 4 or 5 groups of 4-8 all in flight. flocks dispersed rapidly. Groups of two were not uncommon and single birds constituted only about $\frac{1}{3}$ of the total. Saw one dip down to the water, make contact with the bill, & take off.

Several birds lit on the ~~water~~, occ. for 1-2 sec. with the wings closed. One flew much like an Oceanites, going with the wind. Wing beat much slower when the flew with the wind. like Leach's Petrel, much faster ($\frac{3}{2}$) when they went into the wind.

Black Petrel - only 1 for sure, prob. 2. both c. 20 miles out.

Brown Pelican - 75 - within 5 mi. of shore.

Comorant (Braunt's only) - 50 - do.

? Western Sandpiper - about 20 seen c. 10 mi.

W of Pt. Pinos on the way in.

Northern Phalarope - 35 - first ones seen about 9 mi. out. (12)

then in small #s (2-6) ~~seen~~ every 20 min until c. 20 mi. out. then almost none until we were off Pt. Pinos, c. 8 mi out, where about 15 went by. a few from the rest of the way in as on the way out. all winter ^{plumage} ~~plumage~~.

Aug 30

Monterey Bay off Monterey, Calif (boat trip

Pomarine Jaeger - about 8 seen, in the main band of Sooties.

4 on the way out, 2 on the way in. only 1 in.

Parasitic Jaeger - 2 or 3 seen in main band of Sooties on the way out.

Long-tailed Jaeger - an adult with tails seen e.

8 mi. off Pt. Pinos (NW) on the way in. It was on the water, arose, circled the boat twice and then disappeared.

Western Gull - "common" - to about 10-12 miles out,

with a few immatures to as far as we went, following the boat. other gulls seen close to shore - saw. Calif. Heermanns, prob. Herring.

Sabine's Gull - 75 \pm - 3 flocks (8, 11, 15) seen,

+ single birds and loose group of 2-4 to make up the remainder. All the flocks were in the sooty pond, and almost all were seen in areas where Sooties were common. of these only 46 were immatures, the rest adults in nuptial plumage. Many birds were on the water when approached, to the edge of the Sooty flocks and flew off tern-like as we got to 200 \pm feet.

Birds in flight were in general going south.

Common/Arctic Tern - 3 ad seen seen out of the

Acacia not assigned to sp. group of 1, 3, 6, 2, 1 were mostly not identified. 2 were immatures. rest adults. at least 1 and prob. two were

P. DeBenedictis
1964

Aug 30

Monteury Bay, off Monteury, Calif. (boat trip)

clearly gray on the body & under the head with the white face of Arctic, several with them were as dark but without the "face", but prob. the same species. We flushed two additional adults at close range from drift wood, with which were prob. Arctics but were not very gray under the head. My impression of the wing was that the trailing edge was primarily black, the leading edge not so much so. No calls. Most ignored the boat, but one imm. spurt some times directly over head. total - ~~2+ birds~~

2+ Arctic, 11 prob. Arctic.

3 Elegant Terns seen just outside the Harbor on the way out.

1 ? Murre - large dark alcid with white on sides of the tail, seen from rear, c. 3 mi. N Pt. Pinos

6 Cassin's Auklets - 3 groups of 2, all flushed from the water, about 20 miles out.

6 Pall Porpoise - 1 bull Elephant Seal.

no land birds seen. On the way back we stopped at Moss Landing and saw c. 90,000 Sooty Shearwaters working N along the beach, 1/2+ miles out, + additional birds in the water.

